

# SCHOOL MANAGEMENT

*April 1960*

PRACTICAL SOLUTIONS TO SCHOOL MANAGEMENT PROBLEMS

## THE FIRST INSTALLMENT OF SCHOOL MANAGEMENT'S **COST OF EDUCATION INDEX**

A yardstick for measuring your district's financial effort

An Interview with  
J. Lloyd Trump

**Q & A**

**ABOUT TEACHER  
UTILIZATION**

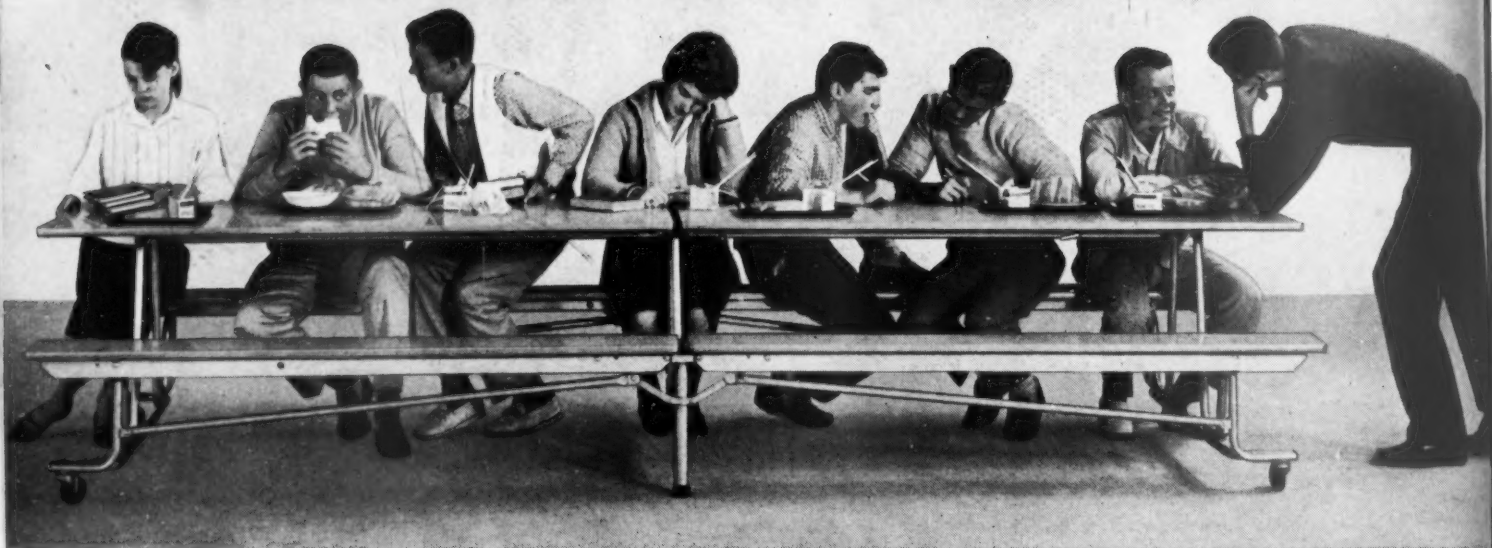
**SOME BLUNT FACTS ABOUT**

**AIR  
CONDITIONED  
SCHOOLS**

**HOW TO SWAY PUBLIC OPINION**

SEE COMPLETE CONTENTS ON PAGE 3

# ERICKSON TABLES ARE BUILT FOR RUGGED USE!\*



*Double steel framing under the benches and under the top. Pivot points anchored in metal —can't pull out. Tough NEMA plastic tops pressure-bonded to solid  $\frac{3}{4}$ " core material.*

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*Circle no. 745 on reader service card for new catalog.*

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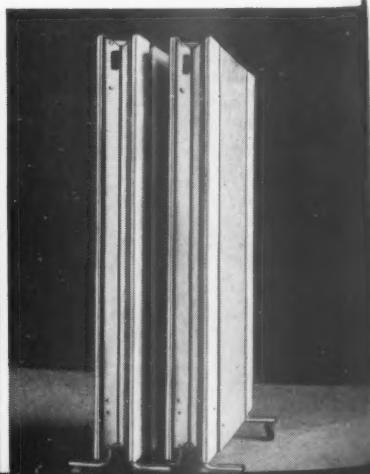
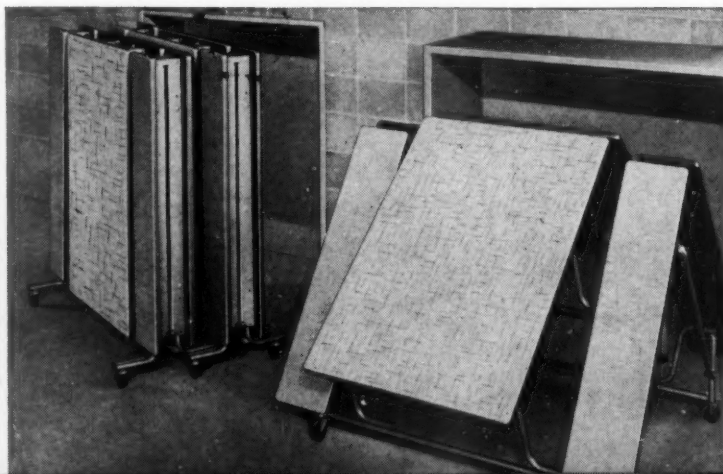
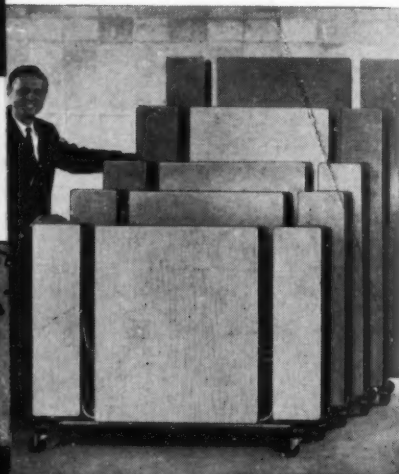
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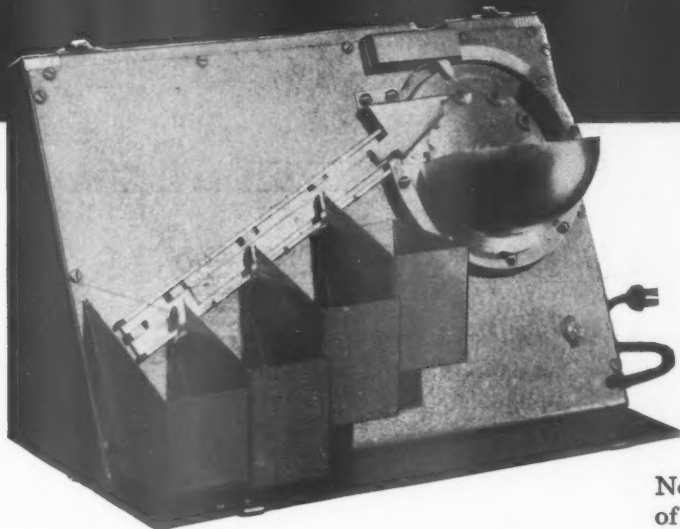
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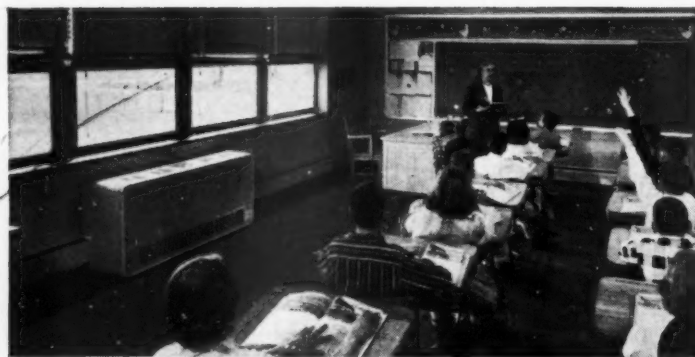
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## Contents for April 1960

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*The teacher shortage is the biggest problem of America's schools today. Here's what Dr. J. Lloyd Trump suggests we do to make better use of the staffs we have.*

#### Some blunt facts about air-conditioned schools 62

*Here are the facts to help you answer two vital questions about air-conditioned schools: "How much will air conditioning cost us?" and "Do we really need it?"*

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# School Officials Make Modest Starts in Educational TV While Planning School District or College Campus Networks

The complete linkage of college classroom buildings or of schools in dispersed districts requires careful study of the physical layouts of these buildings. Also required is advanced planning for television transmission and reception in future school buildings. And equally important are the preparations for complete programming of ETV courses over a linking network.

Many schools are approaching the situation by making a modest beginning. Closed-circuit TV is used in available individual buildings preliminary to the installation of a linking TV network. This realistic approach is sound, and it furnishes a source of valuable information and experience for use as the ETV program expands.

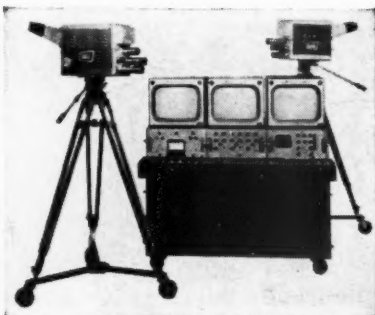
Through this method a corps of experienced personnel will be developed. This includes the professional staff to coordinate the planning of programs and lessons; the trained technicians to conduct preventative maintenance necessary in keeping equipment in good operating condition.

A modest beginning in ETV also provides the opportunity for experimental and exploratory activity. These explorations may delve into the professional use of equipment for improving instruction in the subject areas of a school's curriculum. Further, the explorations may have to do with the physical aspects of the ETV system: the placement of receivers; proper lighting; acoustics; inter-communication and the location of transmitting equipment.

Another vital phase of planning for ETV concerns the selection of proper transmitting equipment. While the equipment should meet the needs for a beginning system, it should also have the facility for future expansion without obsoleting the original equipment. An ETV system that meets these and other requirements has been developed and is being marketed by the Dage Television Division, Thompson

Ramo Wooldridge, Inc., Michigan City, Indiana.

The Dage concept for Educational Television is based on the modular construction of equipment. It is possible to start with one camera, using the Dage Mobile ETS-1 system, and to add additional cameras without obsoleting the first one. The cameras and control units are housed in a



The Dage Mobile ETS-1 system is modular in construction... expansion won't obsolete original equipment.

mobile console so the "mobile" studio can actually be moved from one lesson origination point to another, or it can remain stationary in a studio location. The system further provides for the use of a film pick-up camera. This enables the schools to televise the many excellent educational motion pictures available to them.

While ETV systems should be carefully planned, schools and colleges need not wait for a linking network system. As outlined above, a small start is often the wisest course.

Many schools and colleges planning ETV systems have contacted Dage Television for assistance. As a pioneer in the field of ETV, Dage's engineering and installation experience is of proven value. For further information about Dage ETV systems, or for free consultation write to:

*Dage Television Division,  
Thompson Ramo Wooldridge, Inc.  
2704 W. 10th St., Michigan City, Ind.*

## SCHOOL MANAGEMENT

22 West Putnam Ave., Greenwich, Conn.

Volume 4

Number 4

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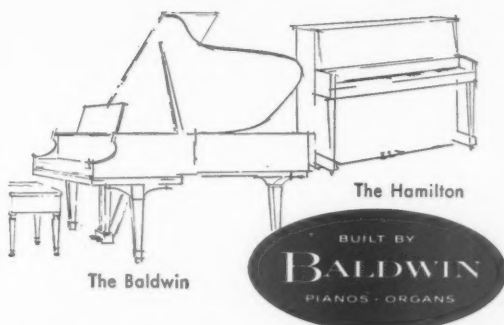
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APRIL 1960







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*Contractor: Holt & Reichard, Norwood, Ohio*

*Glazed by H. Neuer Glass Company, Cincinnati, Ohio*

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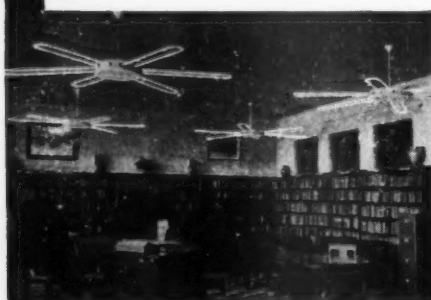
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### No single test

SIR: Your recent reprint of Fred M. Hechinger's article on National Merit Scholarships ("How good are your schools," *SM*, Jan., '60), deserves comment.

An assumption made by Mr. Hechinger is that valid comparison of schools may be made through the use of such national tests. Mr. Hechinger goes further and intimates that such comparisons, though uncomfortable, should be made.

It seems clear that Mr. Hechinger is totally unaware of the nature of the tests employed by the National Merit Scholarship Corp., and, likewise, exhibits an extreme lack of familiarity with the nature of schools in this country. More significant is the fact that Mr. Hechinger displays a lack of knowledge concerning the research methods and controls that would be necessary to arrive at valid comparisons of schools on the basis of tests.

The great variations in schools prohibits the use of a single test, or even a battery of tests, as a yardstick. Schools differ in the nature of the pupil population in such factors as intelligence, socio-economic background, educational goals, in teacher qualification and experience, in curriculum and facilities, to mention a few. In short, to make valid comparisons a multiplicity of factors must be controlled.

To be charitable, Mr. Hechinger's opinions are rather short sighted and do not reflect careful consideration of their bases or implications.

STEPHEN A. KALAPOS  
ASSISTANT IN SECONDARY EDUCATION  
DEPARTMENT OF EDUCATION  
TRENTON, N. J.

### Teachers are rated

SIR: I have read with interest your article concerning merit pay for teachers (*SM*, Jan., '60). It is maintained that the trend is away from merit pay for teachers.

There has always been a system of merit pay for teachers. There has always been a system of rating teachers by the principals, supervisors and superintendents in the schools where they teach, which is readily encouraged and accepted by the teachers.

The teacher gets a merit increase in pay by moving into another city or school system with higher salaries and he gets this increase in pay principally

through the fact that the administrative staff in the school in which he teaches gives him a top rating as a teacher.

It is an extremely unfortunate situation then that teachers must move into another school system in order to get a merit increase in salary. It is more unfortunate that the ratings of teachers are valid only in school systems outside the jurisdiction of the administration of present employment.

What kind of situation exists in which a board of education expects a superintendent to pass judgment on the qualities of the teacher candidates for vacancies and accepts his evaluation of them for purposes of employment, but after the teacher has been employed, the superintendent is not competent to pass judgment on the quality of the teacher on his own teaching staff? The superintendents of my acquaintance are highly competent in their evaluation of the qualities of teachers on their staffs and in choosing teachers for their staffs.

JOHN C. ROBERTS  
DIRECTOR OF TEACHER TRAINING  
AND PLACEMENT  
WESTERN ILLINOIS UNIVERSITY  
MACOMB, ILL.

### SM gets read

SIR: I feel that the article which appeared in your February issue describing the outlook and purpose of The Educational Research Council of Greater Cleveland ("Found: A way to convert 'ideas' to school use" *SM*, Feb., '60) was very well done and of great assistance to those of us who are so intensely involved in the Council operation.

It was particularly gratifying to meet people all during last February's AASA Convention in Atlantic City, N. J., who had read about the work we are doing in Cleveland. Even in elevators, I encountered total strangers who took one glance at my identification badge and immediately recalled what the Council was all about.

REGINALD A. NEUWIEN  
DIRECTOR OF  
ADMINISTRATIVE RESEARCH  
THE EDUCATIONAL RESEARCH COUNCIL  
OF GREATER CLEVELAND  
CLEVELAND, OHIO

SCHOOL MANAGEMENT

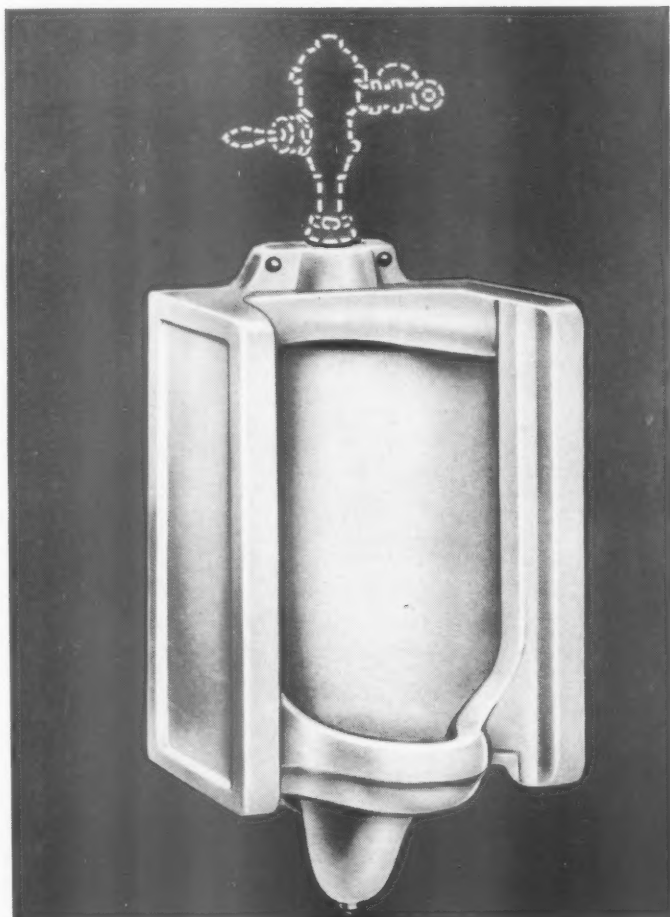
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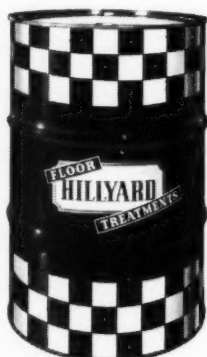


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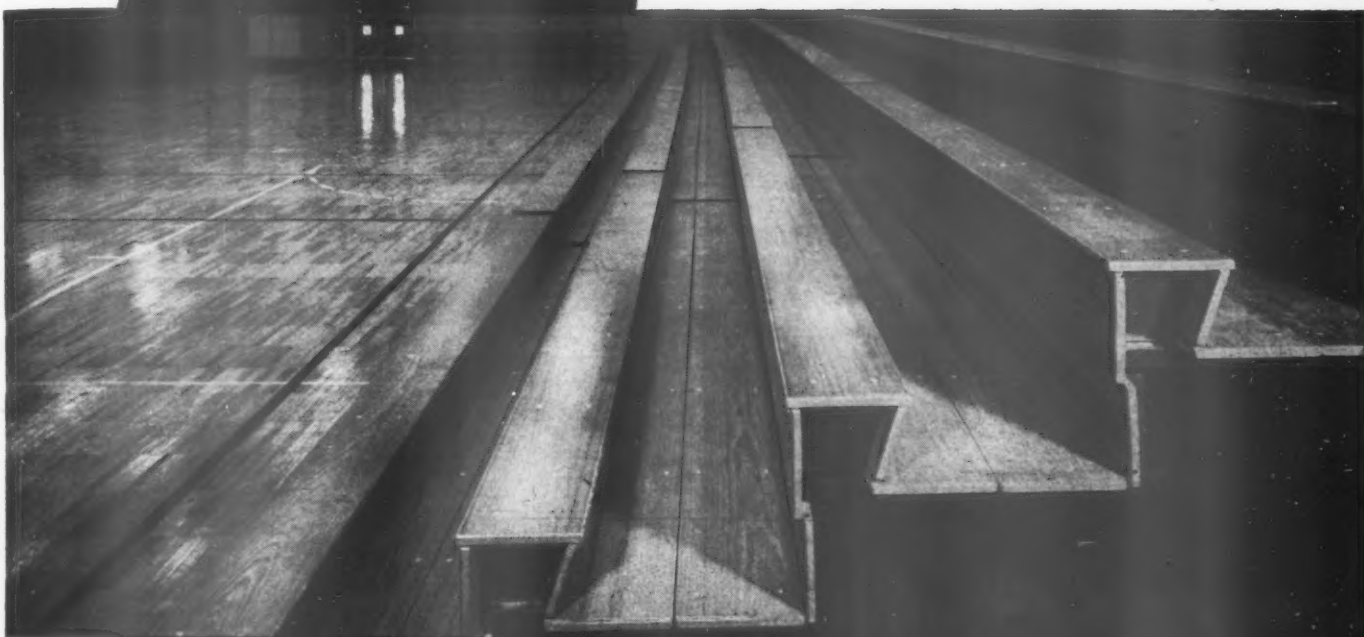
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# Specify

## CLOSED DECK ROLL-OUT GYM SEATS

*They're Designed for Complete Safety*



Showalter High School, Chester, Penna.  
Photos by Cortlandt V. D. Hubbard

There are 16" of safe walkway in this Hussey Roll-Out. Even the size 12½ shoes (at the left) are completely supported with ample room for comfort.

More important—note the absolute security of the woman's feet. She can afford to relax. She knows she can leap to her feet to cheer, or walk along the row, without first having to check her footing. There are no holes into which her toes or high heels can slip.

Hussey gym seat footboards are not catwalks suspended in space. They are an integral part of Hussey's Closed Deck design that provides complete spectator comfort and safety.

**BE FUSSY — SPECIFY HUSSEY**

**HUSSEY MANUFACTURING CO., INC.**  
5 Railroad Ave. North Berwick, Me.

(Circle number 752 for more information)





*The Lennox Living Laboratory: This \$50,000 school has been built by Lennox Industries, Inc. in Des Moines, Iowa to carry on research in the field of school classroom heating, ventilating and air conditioning. Extensive research and testing is carried on continuously, both with and without students present in the classrooms.*

## **GAS** and **LENNOX** can *provide your schools with the finest in fresh air heating and ventilating...*

*at lower operating and building costs*

This new Gas system automatically draws in fresh air from outside... warms, cleans, and circulates air quietly and evenly throughout the school.

It's hard to believe, yet 65¢ per square foot was the complete cost of installing a Gas-fired Lennox Comfort Curtain System in the Potosi, Missouri, High School — including automatic controls, ductwork, labor — everything.

This is unusually low, even for the Comfort Curtain, but costs of \$1.03 in Indiana; \$1.15 in Montana; and \$1.12 in South Dakota were *usual and typical* of the amazing savings offered by a Lennox Comfort Curtain System using Gas.

Money saving, safe Gas units are being installed in thousands of schools across the country. If you have specific questions, your local Gas company or a Lennox specialist — or both — will be available to assist the architects and engineers to illustrate how this equipment can best be applied to any specific school plan. Check the facts about Gas and you'll see — modern Gas heating out-performs all other fuels.

Call your local Gas company or write to Lennox Industries, Inc., 1701 East Euclid Ave., Des Moines 5, Iowa. *American Gas Association.*

(Circle number 709 for more information)





## THINGS YOUR PUBLIC OUGHT TO KNOW

*Basic information that schoolmen can use as a part of a community education program*

### How important is salary in teacher recruitment?

Whatever way you attract new teachers to your schools, this fact is vital: If your recruitment salaries fall even slightly behind other districts, you're at a competitive disadvantage. This NESDEC study tells why.

■ ■ ■ The average salaries of teachers all over the United States have risen by \$1,400—from \$3,000 to \$4,400—since 1950. Great demands have been put upon taxpayers, as a result, to provide this added income to attract better teachers.

But just how important is salary to those who are really devoted to their profession? Not very, if you are to believe recent teacher polls and questionnaires. Most teachers rate location, working conditions, professional standards and opportunities to grow ahead of salary when asked why they are joining a school system. Salary, they say, is just incidental to their decision to teach or not teach in a particular district. (See *SM*, Feb., '60, page 29, for one such report.)

Under these circumstances, it might seem that school boards would do well to stop raising salaries in order to attract the best teachers. They could use the extra money, instead, to improve working conditions, standards and the growth opportunities in their districts. But any school system that followed such a policy would be committing suicide.

#### **Salary is primary**

Actually, whether teachers admit it or not, salary is the single most important factor in their decision regarding where to teach. This

comes as no surprise to most school administrators who have long suspected its truth. Their unsupported belief has now been verified by a recent study of salary patterns in 43 districts in eastern Massachusetts, conducted by the New England School Development Council.\* Says NESDEC, "A salary increase is the *only* major lure that a system can offer as it enters the competitive market in its current hiring season."

Significantly, no teachers were involved in the study. Questions were addressed only to superintendents who could more realistically assess the importance of the means they used to attract new teachers. Most admitted that considerable pressure was exerted in their districts to increase minimum—not maximum—salaries, reflecting an awareness of the need for adequate recruitment lures.

Very few teacher candidates, even when being interviewed by hiring officers, brought up the subject of salary. They were most concerned, according to the superintendents queried in the NESDEC

study, with "locational factors," the system's reputation, working conditions and morale, in that order. Yet, it would be a mistake to conclude from these facts that candidates were unconcerned about salary. First, because no prospective teacher was likely to admit that salary was his primary consideration lest it cast doubts upon his motives. Second, because any candidate who showed up for an interview had, in almost every case, already informed himself about salary levels prior to his arrival.

It is apparent from the study that most superintendents are fully aware of what they are up against. They know that there isn't much they can do about the location of their districts—teachers will either want to work in their areas or they won't. As for a system's reputation and the physical working conditions which prevail, these can only be improved at great expense and effort—and over a long term. But one on-the-spot improvement that has immediate visibility can be made—an increase in the level of recruitment salaries.

#### **You can fall behind**

It isn't surprising, therefore, that most districts compete for new teachers on this basis. Every superintendent is acutely aware of the

*continued on page 20*

\*TEACHERS' SALARIES: THE PROCESS OF CHANGE IN 43 METROPOLITAN SCHOOL SYSTEMS, by Charles S. Benson. Published by New England School Development Council, Spaulding House, 20 Oxford St., Cambridge 38, Mass. Single copies free to NESDEC members. Additional copies: members, \$1.00; non-members, \$3.00.

## An Open Letter to Teachers

If the great New York Philharmonic were going to play in your town tonight, would you urge the boys and girls in your class to attend? If Bernstein or Stokowski or Mitropoulos were going to conduct Beethoven or Mozart or Bartok, would you encourage your students to experience this important event? We feel that you would.

**E**VERY WEEK the New York Philharmonic does play in almost every town across America, over CBS Radio. No one has to stir from home. No one has to buy a ticket. A radio is your front seat.

This is just one of many programs on CBS Radio that make a deliberate effort to bring your community cultural, informative, educational and, just as important, entertaining events that waken your students to new ideas and great occasions, that teach them that the arts are for enjoying, that learning is for living, and show them that the work you do in class extends far beyond the school-room blackboard.

Every week your students can attend the concerts of the magnificent Cleveland Symphony under the direction of George Szell. They can enjoy a weekly performance of the Metropolitan Opera during its season. So many young people have learned from these broadcasts that "Faust" and "Carmen" are exciting stories; that opera singers have as much to offer them as popular singers, that intermission features like Clifton Fadiman's interviews or Edward Downes' "Opera Quiz" are great fun. Have you told them how fascinating such worthwhile programs are?

Has it occurred to you to tie in "The Hidden Revolution" series with discussions in current events and social sciences and government? Last year this series won the Peabody Award for outstanding public service. The subject is the changes and upheavals taking place in the world today. History before it's history! History while it's still a news

story! Edward R. Murrow and Howard K. Smith narrate these programs. Your pupils will get to know men like Vice President Richard M. Nixon, playwright Archibald MacLeish, Dr. Clyde Kluckhohn, Professor of Anthropology at Harvard. Do your students know how fascinating news can be when they hear it from a man like Lowell Thomas? He has been a cow puncher, gold miner, college professor, newspaper reporter, editor, historian, lecturer, author of more than 45 books. His gift is an incomparable one. By telling the big, important stories colorfully and concisely, he makes them real and memorable.

Have you alerted your class to the fact that twice each day they can travel to the remote corners of the globe and get the news firsthand from the finest news reporters in the world—the CBS News correspondents? The programs are "World News Roundup" and "The World Tonight." And top newsmen like Eric Sevareid, David Schoenbrun, Daniel Schorr and Winston Burdett tell the story directly from the scene.

In your classwork in government or history have you suggested that your students listen to "Capitol Cloakroom," and "The Leading Question," broadcast each week on the CBS Radio Network? They'll meet national leaders, get to know their personalities and attitudes, get familiar with important public affairs as they take shape. Fine learning tool for future statesmen!

Is your class aware that by listening to "Face The Nation" on CBS Radio they can hear, firsthand, opinions of world figures, as informed reporters question them? Great inspiration for future journalists, and voters!

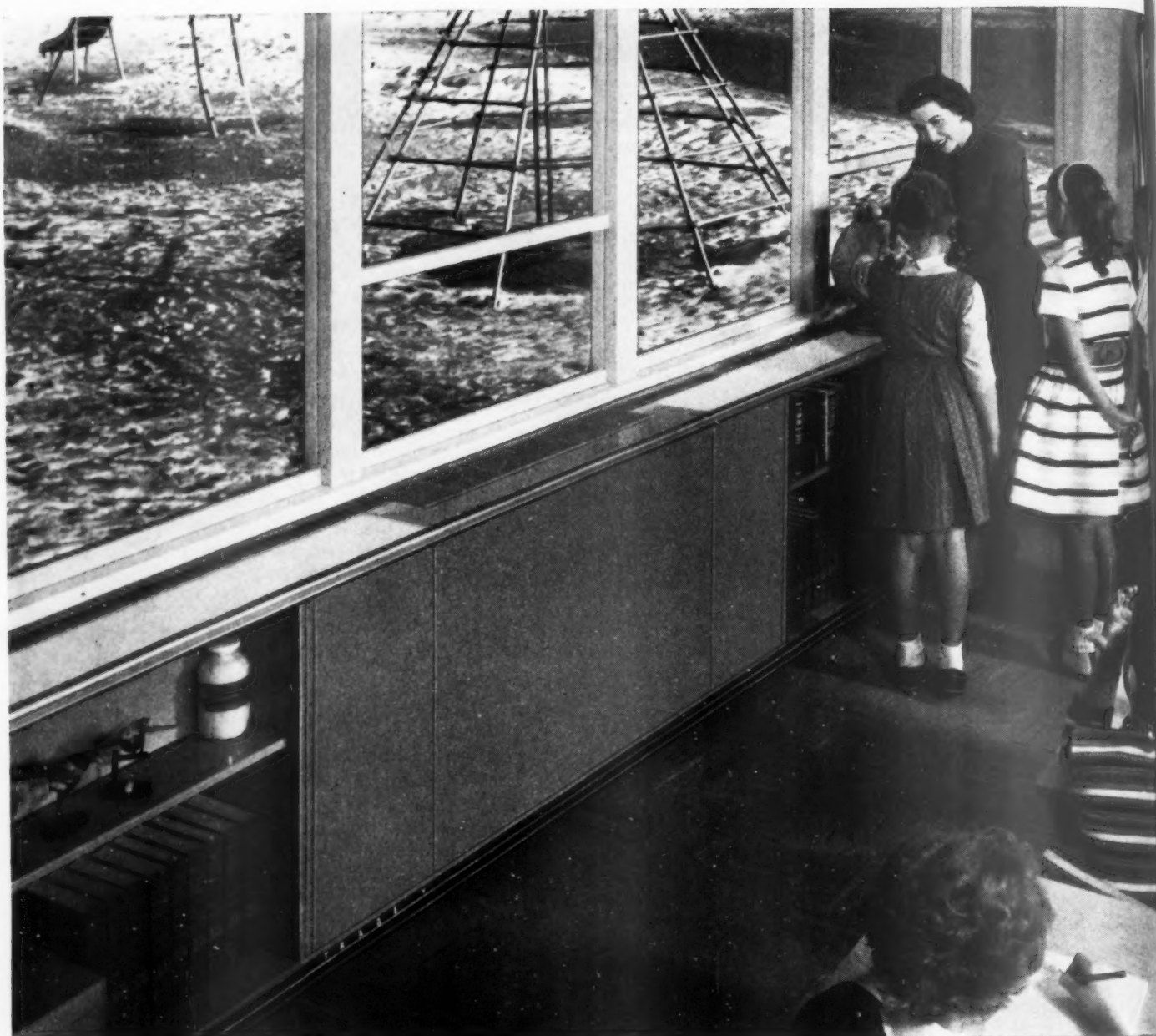
Do your students know what they are missing by not hearing "Invitation To Learning"? Recently critic Alfred Kazin discussed Mark Twain's "Life on the Mississippi." Every week a well-known authority gives a new breath of life to an important literary work.

**D**O YOU REALIZE how many CBS Radio programs are worthy of being made assignments for classroom discussion? Make it a habit to glance at your local daily radio schedules. For just to point out to the boys and girls who sit before you every day the opportunities they may be missing right in their own homes, just to hint that they might actually enjoy "Aida" or Haydn's "Surprise" Symphony or a special news program might be opening a career, planting an ambition, enlarging life for them.

Not to open young minds to what lies so close at hand, so eager for use, so ready to serve, so worthwhile, might be to miss one of the great challenges of teaching. For what better way can we stir these young minds to think, to learn by doing, than by suggesting they use their time for something stimulating and constructive, that is theirs simply for the turning of a little knob.

If today radio stopped bringing such events to your town, if the New York Philharmonic no longer brought Beethoven, if "World News Roundup" no longer took you to Algiers and Tokyo, if the Metropolitan Opera performed only for New Yorkers, if intelligent worldwide news programs gave way to sensational headline flashes, if the only music available were rock 'n' roll recordings, then you and your community would be striving to improve the quality of radio. Fortunately CBS Radio constantly strives to bring you educational, informative, cultural programs that assure your town the finest broadcasting fare.

**I**T IS YOU, by your interest, who control the quality of programming that is brought to your students, the men and women of tomorrow. Suppose, by your lack of enthusiasm, these wonderful things were no longer available, waiting to be heard. Wouldn't you as a teacher make every effort to bring them back? —CBS Radio Network



## New, space-saving Trane available with

*Slim, attractive units save classroom space, provide  
ideal comfort conditions for any school, any climate*

**N**OW there's a TRANE Unit Ventilator to meet the requirements of any school, in any climate. New, more compact units are available with complete, year-around air conditioning—in addition to heating-ventilating. Air conditioning may be included when the system is installed—or added later easily, economically without classroom alterations.

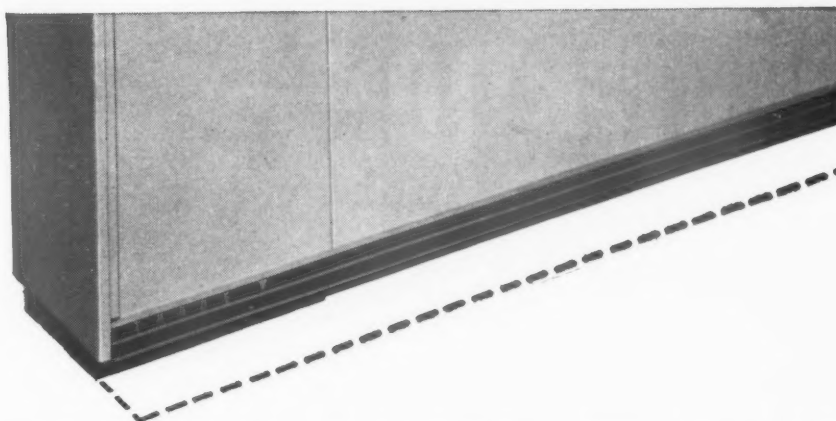
These new TRANE units provide extra classroom space. Their trim, modern lines com-

plement modern school design. And optional shelving provides convenient storage space for books and teaching aids.

*How important is complete air conditioning to the modern school?* More and more school planning is taking air conditioning into consideration. It offers the opportunity to utilize school facilities during warm summer months. And it can extend school use to civic and municipal purposes. Now TRANE—the people



**Provides more usable classroom space!** The new TRANE Unit Ventilator is 21% thinner than other makes of heating units . . . 29% thinner than other makes of heating-air conditioning units. (Other units are as much as 16 $\frac{5}{8}$ " deep.) You can save as much as 14 sq. ft. of space in every classroom!



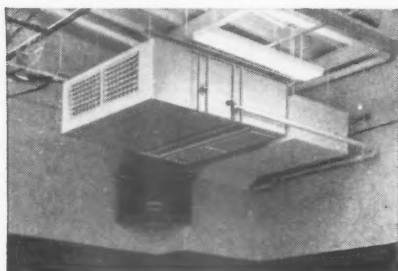
## WHEN YOU DECIDE ON CLASSROOM HEATING-VENTILATING—OR AIR CONDITIONING—LOOK FOR THESE TRANE FEATURES:

- **Modern appearance**—Trim, more compact units designed and styled with modern school decor in mind. Components blended together by matching trim to form a single, continuous unit. Attractive shelving and cabinet space. All types—hot water, steam, electric and air conditioning—in same space-saving cabinet design.
- **Continuous, room-wide ventilation**—Only the TRANE Kinetic Barrier system provides continuous powered ventilation and heating or cooling from room-wide outlets. Eliminates window downdrafts, sleepy corners.
- **Sturdy construction**—Rugged casing takes hard

knocks of classroom use. Dampers, fans, coils designed for long, trouble-free service. Unit, shelving and extensions are of heavy gauge steel.

- **Simplified maintenance**—All maintenance can be easily performed by school engineer. Panels, easily removed and handled by one man, provide access to all working parts. Fans are easy to clean; filters easy to change. Fan and motor bearings are easy to lubricate.
- **Versatile**—There's a TRANE Unit Ventilator for every school requirement: heating-ventilating units for steam, hot water or electric heating; and now, *complete air conditioning* that may be included when the system is installed or added later.

*...and TRANE provides a single source for every school heating, ventilating, air conditioning need!*



**In gymnasium and locker rooms,** TRANE Torrivents heat and ventilate, blend in outside air in any desired proportion, gently warm the atmosphere. 1250 to 33,000 cfm.



**In hallways and corridors,** TRANE Wall-Line and Wall-Fin Convectors provide economical heating for long wall and window runs. Capacities for any size or type of installation.



**In entryways,** TRANE Force-Flo Heaters greet pupils with warm welcome . . . blanket doors with a wall of tempered heat that blocks cold air, stops drafts.

# Unit Ventilators now air conditioning!

who have air conditioned *everything* from skyscrapers to jet planes to subway trains—offers air conditioning equipment designed especially for the modern school.

When you plan to build or remodel your school, turn to TRANE for the latest, most modern Unit Ventilator system. You'll save space, cut installation and operating costs—while providing ideal comfort conditions, all day long. Have your architect, consulting engineer or contractor contact your nearby TRANE Sales Office; or write to TRANE, at La Crosse, Wisconsin.

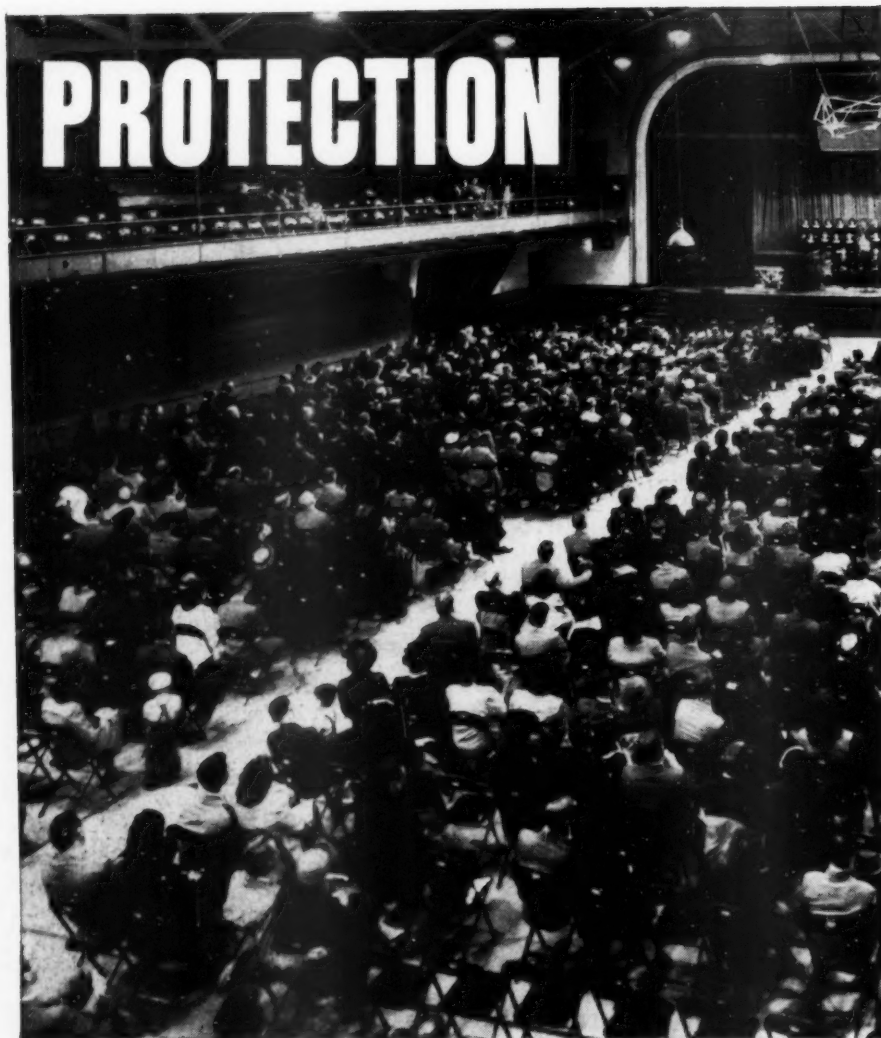
**For any air condition, turn to**

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## Let the finish take the wear ...choose Seal-O-San!

Must your gym double as an auditorium, dance hall, roller skating rink, short cut to other parts of your building—even a play area? Then be certain the floor is protected for long life, and *let the finish take the wear!*

Seal-O-San gym floor finish offers the advantage of protection, *plus* slip-resistance, durability, light color, easy application and simple maintenance. Ask our representative, the Man Behind the Huntington Drum, or write for more information about Seal-O-San gym floor finish. And if you have wood floors in halls, classrooms or elsewhere in your building, ask about the Seal-O-San products which will help lengthen their life while beautifying them. Write today!

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salary levels in districts adjacent to his own and strives to keep on a par with them. This is borne out by comments elicited in the NESDEC study: "The effect of a \$300 difference is tremendous," and, "The new teachers don't judge a system on anything but salary."

As a result, superintendents expressed concern about falling behind neighboring districts by as little as \$300-\$400 in a given year. They felt that if they did, they would be severely handicapped in their search for new teachers for some time thereafter. Their reasoning was based on two factors:

1. The pronounced visibility of salary levels. Once a district has been pegged as paying less than its competitors, the reputation is sure to stick—even for a while after it has drawn abreast of other districts.

2. The difficulty of catching up. If a system once falls behind, it will have to boost its beginners' scale by twice as much the following year since its competitors have been raising their scales regularly all along. No superintendent relishes the prospect of requesting twice the usual increase for his staff in order to regain his district's competitive position.

### But you can't really get ahead

What of the other course of action? If lagging behind is dangerous, shouldn't stealing a march on your competitors by raising salaries beyond the prevailing rate prove an advantage? According to the NESDEC study findings, it does not. When a district raises its salaries beyond the prevailing rate it sees no change in the flow of teacher recruits. But, at least, it is assured of remaining in a competitive position even if it doesn't raise salaries again the following year when other districts raise theirs.

The NESDEC study concludes that there will be no end to this upward-spiraling pattern in recruitment salaries until some recognition is given to the differing roles of individual teachers. Once job complexities and levels of responsibility are rated, recognized and rewarded, teachers will be attracted to a school district by the professional development it offers. Only then will emphasis shift from starting salary to the long-term satisfactions that teaching can provide. **End**

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It put a new sparkle in her eyes!



"We have *Study-Centers* now!  
Are they nice . . . this one is mine!"



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"YOU CAN tell it's mine, because it's just my size. See? My legs don't press against the edge of the seat. That's how you tell if it's not too high. We adjusted our seats and desk tops yesterday. I've grown an inch and a quarter since school started last fall.

"Does your desk top tilt like this one? If it doesn't . . . you should have a new desk, too. It's a lot easier to read when you don't have to hold your book up. But you better put the top down level if you ever work with clay. Billy Bartlett spilled his all over the floor one day.

"The top looks like wood . . . but it's really plastic. Plastic is better. I know . . . because my desk last year had a wood top, and some of the *boys* had carved initials and things in it. You should have seen Billy Bartlett the day he tried to mark this desk top. He broke his jack-knife. Was that funny!

"Our new desks have such pretty colors. I feel sorry for the boys and girls who have those dark, ugly desks

like we used to have. It makes your eyes hurt to look at them.

"Guess how many more kids we've got in our class this year. Nine! But we're not a bit crowded. My seat turns both ways . . . just like the one Daddy has at his office. Only mine adjusts back and forth, too. His doesn't do that! Last year we had so many tables and chairs, and they were so close together that you had to squirm to get out of them. Honest. You should have seen us the day we had the fire drill. We were the last class out of the building.

"We move our desks around a lot. They're not heavy . . . and they've got little round feet, so the desks hardly make any noise when you move them. Sometimes we're in groups, and sometimes we're in rows. Sometimes we're allowed to talk, and sometimes we have to keep still.

"I wish I could take my Study-Center home with me. It's so comfortable. Mother's always telling me to sit up straight. If I had my own Study-Center, she wouldn't have to."



Think in terms of bright-eyed youngsters when the time comes for *you* to buy school furniture. Know who makes it . . . and why . . . and what it will do for students.

**REMEMBER:** Schools are built to give students a place to sit and learn (they'll *sit* 15,000 hours, kindergarten through college). School furniture is the *most important* single equipment purchase you're called upon to make affecting the physical and intellectual development of children.

Study-Center is a trademark of the American Seating Company.

# O.K.? . . . . OR . . . . K.O'd?



Study-Centers give students a lift for life.



Eliminate posture problems of old-fashioned furniture.

The desk makes the difference! When you figure your children will sit 15,000 hours, kindergarten through college, you see how important school furniture is. It is *the* most important single equipment item purchased for both their physical and intellectual development. When American Seating's Study-Center costs less than a penny a week more than ordinary furniture, can you settle for less? Get all the facts now! Write for our free booklet.



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APRIL

Impact and fire resistance are twin features of this Polished Misco Wire Glass installation in Tennessee School for the Deaf, Knoxville, Tenn. Architect—Painter, Weeks & McCarty, Knoxville, Tenn.



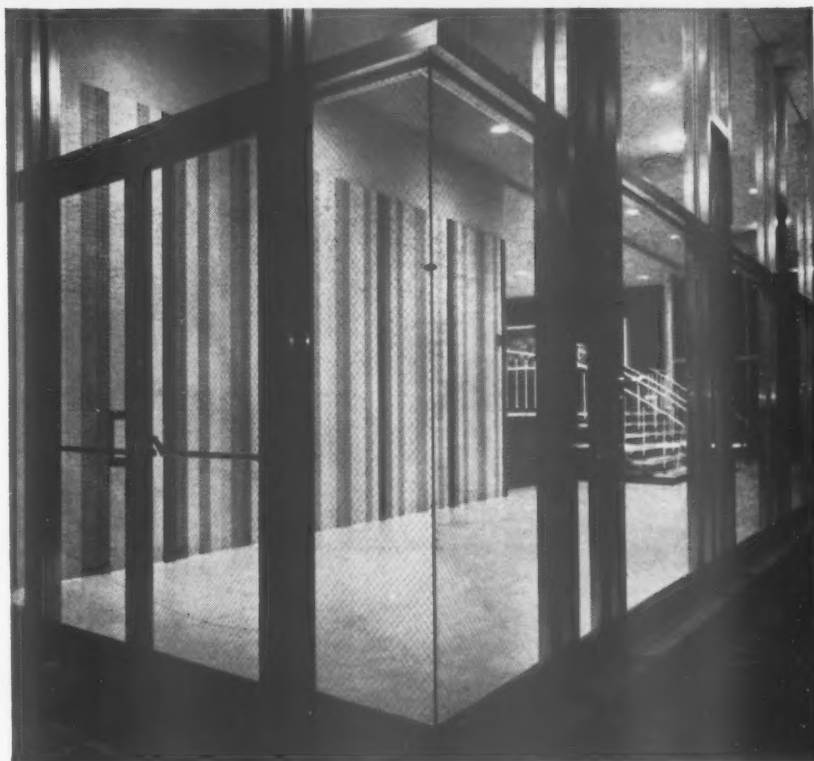
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Combining beauty, utility, and economy, Mississippi leads the way by making available an extensive selection of translucent glass patterns that do wonderful things with daylight. In addition, rugged Mississippi Wire Glass, whether for obscurity or clear vision, affords effective but inconspicuous fire protection while enhancing the appearance of any school... when installed in partitions, skylights, stairwells, windows, doors, or wherever else fire and breakage protection is required. The versatility of Mississippi glass provides architects and engineers with a practical solution to virtually every daylighting problem, including safety with decoration, with heat absorption and with light diffusion and direction.



Polished Misco Wire Glass glazed in main entrance of Hellertown High School, Hellertown, Pa. Architect—Heyl, Bond & Miller, Allentown, Pa. Contractor—Gottlieb-Schneider, Bethlehem, Pa. Glazing Contractor—Penn Allen Glass Company, Allentown, Pa.

For details, see your nearby distributor of quality glass or write for latest catalog. Address Dept. 17.



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# BEAR-TEX, with the unique new BEAR-TEX Holder, the only floor-cleaning pads that can be positively centered and securely held in position!

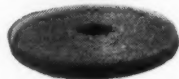
Moreover, BEAR-TEX pads are *not* just surface-coated. Only BEAR-TEX has cleaning agents equally dispersed throughout the entire pad. This means longer, even cleaning action.

Still more: You can use BEAR-TEX pads on any model machine. You clean any type of floor.

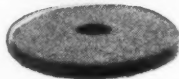
Want to see for yourself? Try a demonstration. Call your BEHR-MANNING representative, or write Dept. SL-4.



**BEAR-TEX Coarse**—for heavy-duty stripping and scrubbing.



**BEAR-TEX Medium**—for light scrubbing, "dry cleaning" or buffing.



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**Mounted BEAR-TEX Holder.** Note deep recess which prevents holder from floor contact.

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BEHR-MANNING PRODUCTS: Coated Abrasives • Sharpening Stones • Pressure-Sensitive Tapes • Floor Maintenance Products  
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Stop the movie...study and discuss a single frame. Only Bell & Howell's new Filmosound Specialist lets you automatically hold the single frame for as long as you want...the picture stays bright, and there's no danger of damaging the film.

The Specialist lets you reverse film, and go back to discuss a particular scene. It's the most versatile of all sound projectors, and the simplest to run. All critical film handling parts are sapphire jeweled for 400% longer life. Mail the coupon today for your copy of "Teaching and Training with Motion Pictures," and complete information on the new Filmosound Specialist.

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This material—promotional and otherwise—contains ideas of possible value to you and your schools. Each item listed will be sent to you without cost.

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**Aluminum roof coatings.** Application details and complete specifications for a new line of aluminum roof coatings are contained in an eight-page brochure produced by The Garland Co. Four new ingredients contained in the coatings offer increased roof protection, adhesive qualities and interior building cooling. Suitable for use on new or old roofs of felt, composition, corrugated or metal, the coatings contain an anti-oxidizing ingredient that keeps roofs alive, a fish-oil blend that penetrates old roofs to restore flexibility, a mineral-base material that resists heat, cold and ultra-violet rays and a protective blanket of glass fibres that won't flow or pull away.

For a free copy of this brochure, circle number 832 on the Reader Service Card.

**History curriculum aid.** A timely booklet, "Our Nation's Heritage," edited by William Roehrenbeck, director, Jersey City public libraries, is available from Collier's Encyclopedia. Based on an article dealing with the period of the American Revolution in the encyclopedia, the booklet analyzes the situation in the American colonies prior to the Revolution, cites many references to important battles and campaigns, selects biographical notes on key military and civilian leaders, points out places of historical interest and draws conclusions about the political and economic effects of the struggle.

For a free copy of this booklet, circle number 870 on the Reader Service Card.

**Sound teaching.** That's the intriguing sub-title of a most informative booklet on language laboratories published by Magnetic Recording Industries. Titled, "Have Language Laboratory: What Now," the booklet was written by Dr. Gustave Mathieu, director of the Margaret Hussen Memorial Language Laboratory, Pomona College, Calif. Described as "a brief guide to effective labmanship," it gives practical answers

to questions about electronic teaching tools and describes in detail the basic principles of language laboratory teaching. Many suggestions are offered to help teachers design and organize programs that will suit students' needs, the school, level of instruction, language and objectives. A laboratory planning guide is included in the booklet.

For a free copy of this booklet, circle number 899 on the Reader Service Card.

**Protective lamination.** Lifetime protection for record cards, newspaper clippings, photographs, maps and all kinds of printed materials is now possible with Sealamin, a laminating film described in a four-page folder available from Seal, Inc.

For a free copy of this folder, circle number 901 on the Reader Service Card.

**How to lay out a lab.** An illustrated manual, "Science Furniture for Schools and Colleges," by James Flaherty, is available from Laboratory Furniture. It enables educators, administrators, architects and builders to visualize and create laboratory arrangements ranging from the simplest storage cabinet bank to a completely furnished and equipped laboratory for advanced science courses. The publication presents thousands of steel and wood laboratory tables, cabinets, fume hoods and specialized furniture, and graphically offers varied combinations and layouts. Also included are selector guides for proper table top materials, details of electrical and plumbing needs and combinations of service fixtures. The work is divided into appropriate sections: secondary school, college and advanced science and general laboratory equipment components.

For a free copy of this manual, circle number 834 on the Reader Service Card.

**All about fire alarm systems.** Typical job specifications covering all fire alarm systems are included in Standard Electric Time Co.'s 36-page, two-

color catalog covering its line of fire alarm and master coded and box coded systems. In addition, components and accessory equipment, including stations, detectors and signals are illustrated and described.

For a free copy of this catalog, circle number 896 on the Reader Service Card.

**Posture posters.** Employing a completely different approach to teaching the fundamentals of healthful posture, four attractive, non-commercial, full-color posters, designed to appeal to both boys and girls from kindergarten through high school, are now offered by American Seating Co. This complete teaching tool contains information about proper posture control, instructions for correct classroom furniture adjustments and suggested posture teaching techniques. A "Good Posture Award" badge is included.

For free copies of these posters, circle number 835 on the Reader Service Card.

**School accounting principles.** A remarkable new 20-minute sound and slide presentation by Burroughs Corp. of machine accounting for public school districts of varying sizes, "This Business of Education" covers eight different school districts, includes the actual voices of school officials reporting on their experiences. Districts included range in size from Carrollton, Mo., with 1,200 enrollment to Atlanta, with 143 schools. Film is available to a single school official or to a group.

For a free showing of this film, circle number 836 on the Reader Service Card.

**Microfilm guide.** A booklet demonstrating how to make the most economical and efficient use of microfilm has been published by Charles Bruning Co., Inc. The illustrated guide emphasizes the fact that planning is the most important key to any successful indexing and filing system.

continued on page 146

# HOW TO TEACH MORE EFFECTIVELY WITH AN OVERHEAD TRANSPARENCY PROJECTOR

*An important visual aids primer -- clip and save it*

As a person who uses and is often called upon to advise in the selection of visual aids equipment, it is essential that you become familiar with the many advantages of overhead projection techniques—how it can make your teaching even more effective, how it helps the student to grasp and to retain ideas, how it increases the scope of your subject matter.

For many teachers the prime advantage of the overhead transparency projector is the fact that it is the only type of projection equipment that is designed to be operated in broad daylight. The ordinary classroom becomes a theater without turning out the lights or drawing the shades. Of course, you must have a projector that provides the maximum screen light required to retain detail and color. Projection Optics' Transpaque Jr., for instance, provides up to three times more light on the screen than any other projector of its type. Transpaque Jr.'s exclusive optical system has completely eliminated a serious overhead projection problem — the distracting rings that have always appeared on the screen.

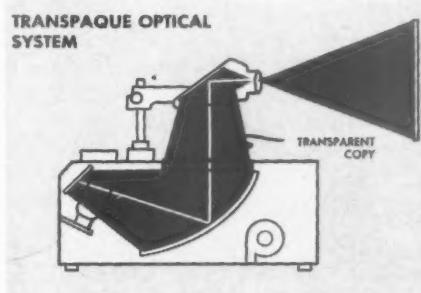
## Up-Front Projection

With this teaching tool, both you and the projector are at the head of the class. As you teach, you face your students. You can gauge their reactions, spot questions immediately; students can take notes and you can refer to yours. Remember, the lights are on! In short, with the Transpaque Jr. you retain all the advantages of a classroom environment.

The very small profile of Transpaque Jr., especially the projection

head, makes every seat usable. There is nothing obstructing your view of the class. Every student is able to see both you and the screen. The more compact Transpaque Jr. is also easily portable.

Superimpose transparency over transparency, building a progressive story before the eyes of your class. Transpaque Jr. retains the brilliance



and color even through multi-colored overlays. Each transparency has a large 10" x 10" format. You can tailor-make them yourself, simply and inexpensively. You can buy them already prepared, covering a multitude of subjects.

## Write As You Speak

To create large screen images of your notes or ideas, just write in your normal size script on a transparency. It is projected as you write,

(Circle number 771 for more information)



just behind you on the screen. You can draw lines, write clarifying remarks, circle areas of special interest. Your individual technique is as unlimited as your own imagination. There is no squeaky chalk or tiresome blackboard work. Use the roll of transparent film. Write on it and roll it away for a continuous supply of clean writing surface.

Transpaque Jr. is UL-CSA approved. It is easy to operate and trouble-free. For a free demonstration or additional information, write to

**Projection Optics Co., Inc.**  
275 Eleventh Avenue  
East Orange, New Jersey

In Canada, Anglophoto, Ltd., 380  
Champagne Ave., Montreal, Quebec.



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**"TECHNIQUES OF MIMEOGRAPHING"**—a vital basic handbook with special sections for the mimeograph operator, the typist, the artist. How to prepare and run stencils, eliminate waste. Maintenance tips for longer machine life. How to select the right paper and ink. How to use color inks—and much more. Simply told with helpful illustrations.

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Enclosed is 25¢ for my copies of "Mimeograph Supplies Selector" and "Techniques of Mimeographing."

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(Circle number 733 for more information)

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**SM**

**WHERE TO GET HELP**

*A guide to useful information*

### SCHOOL FINANCE

**Whose responsibility?** Local government, weakest in ability to raise tax revenue, does 56% of all school financing. Most of the remaining 44% is contributed by the state, which is second in taxing ability. Only 4% of public school money is provided by the federal government, although it raises 69% of all taxes. These facts indicate, according to the NEA in a booklet just released, that one of the nation's biggest businesses is being financed in a decidedly unbusinesslike way. Local financing, states the booklet, is weak because it depends on the property tax to raise revenues. States are also hamstrung in their attempts to raise taxes for school use lest increased rates discourage new residents and business. The Committee on Educational Finance, which prepared the booklet, offers several suggestions for improving local and state financing: Uniform assessment of property at full value, consolidation of too small school districts and a lessening of unduly restrictive limits on local property-taxing powers. Further, it feels that state and local financing is not enough—adequate financial support must be provided at all government levels, including national.

**WHAT EVERYONE SHOULD KNOW ABOUT FINANCING OUR SCHOOLS**, by John K. Norton, NEA Committee on Educational Finance, 1201 16th St., N.W., Washington 6, D. C. 50¢.

### AUDIO-VISUAL

**Educational television.** A booklet just published by the U. S. Office of Education contains the latest up-to-date information about current developments in the use of television for educational purposes. Included in the new publication are lists of new books on the subject, educational television stations, statewide networks, foundations supporting ETV and local school districts which make regular use of television. Also noted is the fact that Congress has appropriated \$3 million for the current fiscal year to provide for research and experimentation in the educational use, not only of television, but also of motion pictures, radio and other related media. The booklet was prepared under the direc-

tion of Dr. Franklin Dunham, specialist in radio-television in the educational media branch.

**EDUCATIONAL TELEGUIDE**, by Franklin Dunham, Superintendent of Documents, U. S. Government Printing Office, Washington 5, D. C. 80 pages, 30¢.

**Equipment directory.** Two entirely new illustrated sections, "Language Laboratory Systems" and "Transparency-Making Equipment," are featured in the newly-published sixth edition of the Audio-Visual Equipment Directory. Former sections, including the various types of projection equipment, screens, projector stands, recorders and playbacks, have been maintained and contain more than 300 new models listed for the first time in this edition. Each language lab listing describes the functional capabilities of the system, and is cross indexed so that specifications for tape recorders and phonographs included may be found individually listed in their respective sections. Also included are reference source listings for classroom television receivers, classroom radios, slide sorting and mounting equipment, slide binding equipment and materials and teaching machines.

**THE AUDIO-VISUAL EQUIPMENT DIRECTORY.** Published by National Audio-Visual Assoc., Inc., Fairfax, Va. 250 pages. \$4.75 (\$4.25 if payment accompanies order).

### ELEMENTARY EDUCATION

**Grades four, five and six.** The results of a four-year study of school programs across the country by the Elementary Schools Section of the U. S. Office of Education are presented in this government publication. Children, the study points out, want and need to know what is expected of them. Those unaccustomed to talking things over with their parents in their earlier years are more likely to rebel against authority later on. Children from the ages of nine to 12 have a driving need for activity—they need play space, are interested in and investigate everything they come into contact with and like best to do things with friends

*continued on page 34*



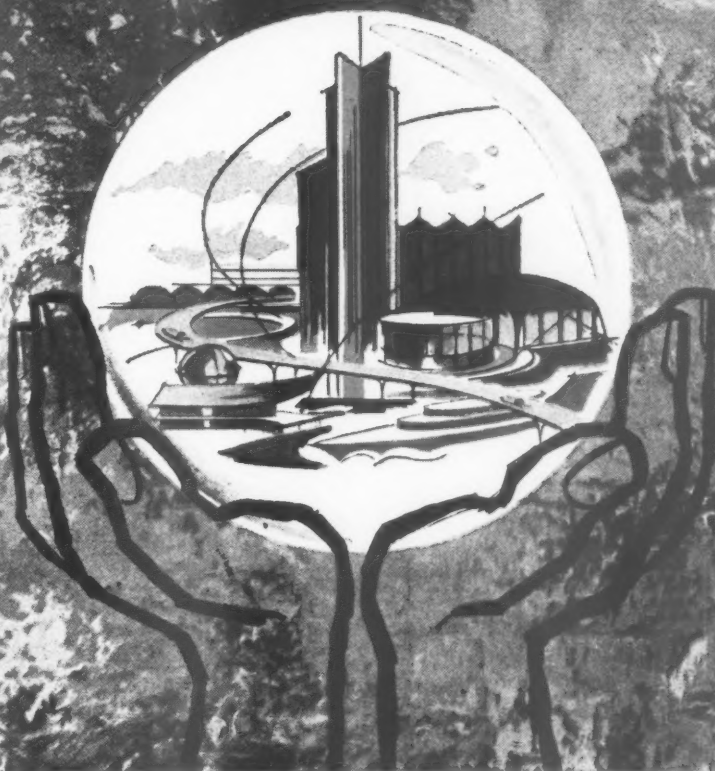
JOHNSON CONTROL SETS THE PACE . . . For 75 years, school officials, architects, and engineers have relied on Johnson for the temperature control systems used in the nation's schools! Johnson leadership spans the life of the control industry . . . from Warren Johnson's invention of the first school thermostat to the very latest in air-conditioning control centers. You can continue to look to Johnson for the world's finest controls!

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# "CLOSE SHAVE"

## in the classroom

Drivotrainer teaches safer driving habits, better judgment without risking lives or property

For beginner or veteran, the *real* test of driving ability lies in an emergency! That's why students in high schools using the Aetna Drivotrainer system as a basic part of the driver education program are better, safer drivers. The Drivotrainer, an electro-mechanical training device, permits students to "drive" through all kinds of situations—face emergencies only a life-time of driving experience could duplicate. Conditioning students to react *instantaneously* and *correctly* is done in the classroom—without risk to life or property. Used in conjunction with dual-control on-the-road instruction, the Drivotrainer saves *teaching costs*, saves *time*, and saves *lives*.

With increasing need for expanded driver education placing more demands on teachers' time, high schools everywhere seek ways to teach more students better, faster and at lower cost. Here are three important advantages the Drivotrainer offers:

**Better educational value** —teaching basic driving skills, developing safer driving attitudes in a wide variety of learning situations.

**Higher level of student proficiency** —permitting instructors to drill students in facing emergencies until satisfactory level of performance is achieved.

**Lower per pupil costs** —multiplying the number of students that can be taught *without* increasing the teaching staff, making reduction of dual control on-the-road time possible.

**Rockwell extends service to schools** by manufacturing and distributing the Drivotrainer system which was developed as a public service by the Aetna Casualty and Surety Company. Working closely with a panel of nationally known educators, Aetna perfected the Drivotrainer at a considerable investment in time, money and effort. Now, with its effectiveness fully documented by educators, the Drivotrainer is taking a place in more high school driver education programs—and is used by the U.S. Air Force in re-training experienced drivers.

Rockwell will continue to provide the same quality of product and of service which has won for Delta Power Tools a place in 72% of U.S. school shops, and that has made Rockwell measurement and control instruments the standards of quality in their fields. For further information on the Drivotrainer and Deferred Sales Plan, write: Rockwell Manufacturing Company, AVM Division, Dept. 405D, Pittsburgh 8, Pa.



No risk is involved when "emergency" is on film and student is at the wheel in the Drivotrainer classroom.



Students "drive" stationary cars equipped with all essential instruments and controls. Manipulative skills are developed as students become acquainted with basic traffic patterns taught through specially prepared film series.



Recorder and film projector are contained in central unit. Automatic scoring system prints actions of each student on master sheet, enabling instructor to follow individual performance.





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It!

## it takes typists hours to do what Copyflex does in minutes!

There's no question about it, Bruning Copyflex copying machines have come to stay in school offices across the country. They have proved their ability to eliminate slow, costly clerical copying, save hundreds to thousands of dollars annually in the preparation of transcripts of student records, progress reports, examination sheets, purchase orders, and a host of other paperwork.

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of the same sex. A major portion of this report is taken up with methods by which teachers and curriculum makers try to educate children in grades four, five and six by using drives and interests characteristic of them.

EDUCATING CHILDREN IN GRADES FOUR, FIVE, AND SIX. *Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. \$1.*

**The nongraded school.** Information on the nongraded school movement, and help for those interested in establishing nongraded schools, is provided in this handbook on the subject. The operation of the nongraded school is discussed in detail, together with theories of curriculum, ways of reporting pupil progress and methods of grouping based upon knowledge of how children learn various skills, concepts and appreciations. Central to the authors' concept of the function of nongraded schools is their insistence upon the establishment of realistic achievement norms. These should be set in the course of observing students attacking the learning tasks set before them. A valuable appendix, based upon studies conducted by the authors in 1957-58, presents brief outlines of nongraded programs in operation in various districts throughout the country.

THE NONGRADED ELEMENTARY SCHOOL, by John I. Goodlad and Robert H. Anderson. Published by Harcourt, Brace and Co., 750 Third Ave., New York City. 248 pages. \$4.95.

### HIGHER EDUCATION

**College goals.** George N. Shuster, president of Hunter College, N. Y. C., examines many different aspects of higher education in this volume culled from his many addresses and articles on the subject. He discusses, among other things, academic freedom, the impingement of philosophy—past and present—on our way of life and the difference between education and wisdom. He wonders why we are teaching and what we are teaching for. And, even more to the point, whether we are training students to earn a living at the price of learning to live wisely.

EDUCATION AND MORAL WISDOM, by George N. Shuster. Harper & Brothers, 49 East 33 Street, New York 16, N. Y. \$4.

### MAINTENANCE

**Lighting.** For all those concerned with the maintenance and function of school lighting, this book should prove an invaluable reference. It covers incandes-

*continued on page 39*

# 411<sup>th</sup> SCHOOL

**selects herman nelson**  
**“now or later”**  
**air conditioning**

**LIDA LEE TALL ELEMENTARY SCHOOL**

(Laboratory School) Towson State Teachers College, Towson, Maryland; Architects & Mechanical Engineers: Finney, Dodson, Smeallie, Orrick & Associates, Baltimore; Structural Engineers: J. L. Faisant & Associates, Baltimore; General Contractor: Anchor Construction Company, Baltimore; Mechanical Contractor: George H. Schuman Company, Baltimore.



(turn page for cost data)



**NEW *kernel-cool* III offers**  
**OPTIONAL COLOR,**  
**OPTIONAL FUNCTION,**  
**OPTIONAL AIR CONDITIONING**

**and Nelson flexibility brings  
the cost within any school budget**

Herman Nelson—the company that made air conditioning economically practical for schools by providing for it on an optional, “now or later” basis—now offers brand new unit ventilator styling with optional color and optional function, too!

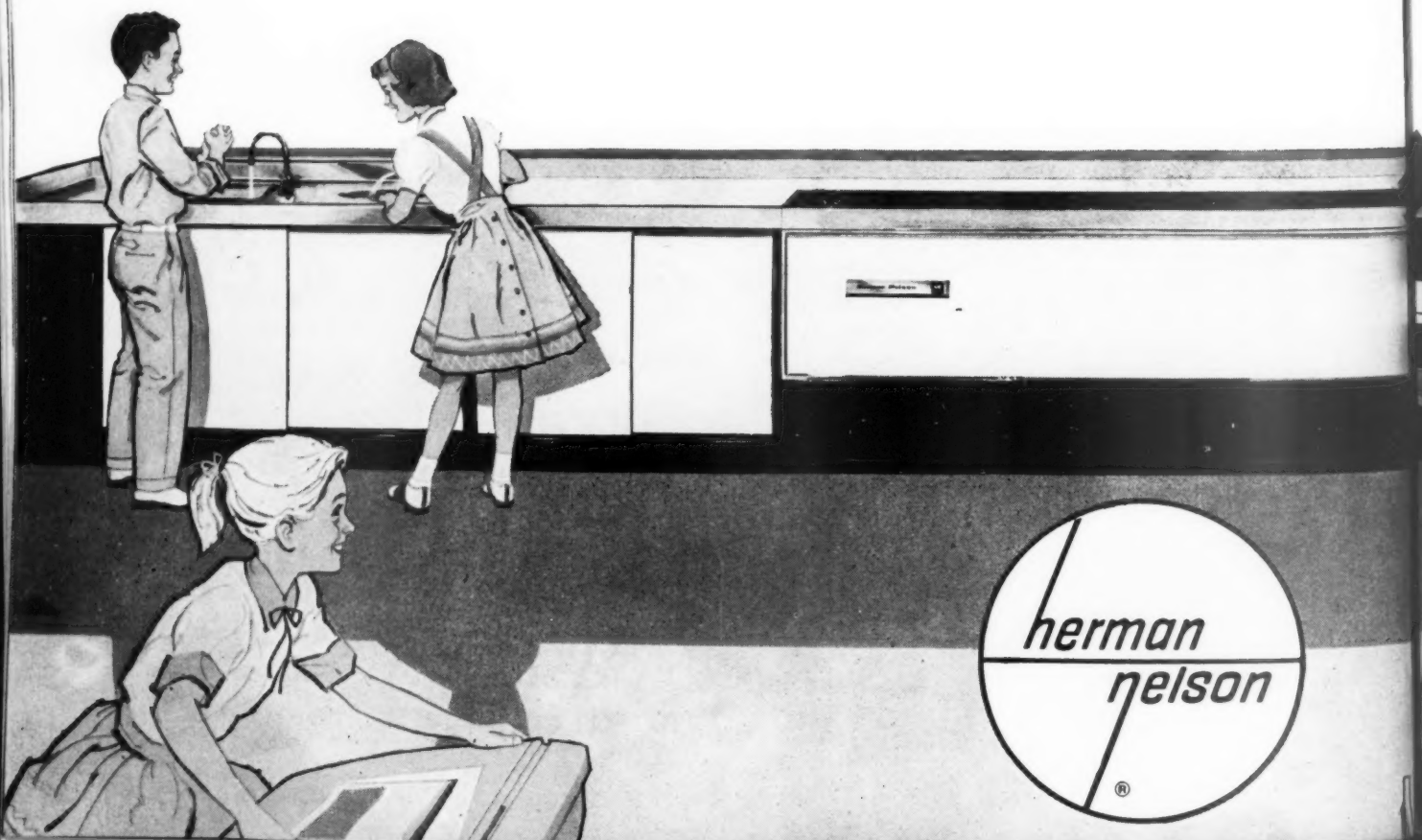
**OPTIONAL COLOR!** Your choice of unit ventilator equipment in six new decorator colors: Flame, Green, Blue, Salmon, Yellow and Neutral Gray.

**OPTIONAL FUNCTION!** Your unit ventilator accessory equipment can contain (1) sink and

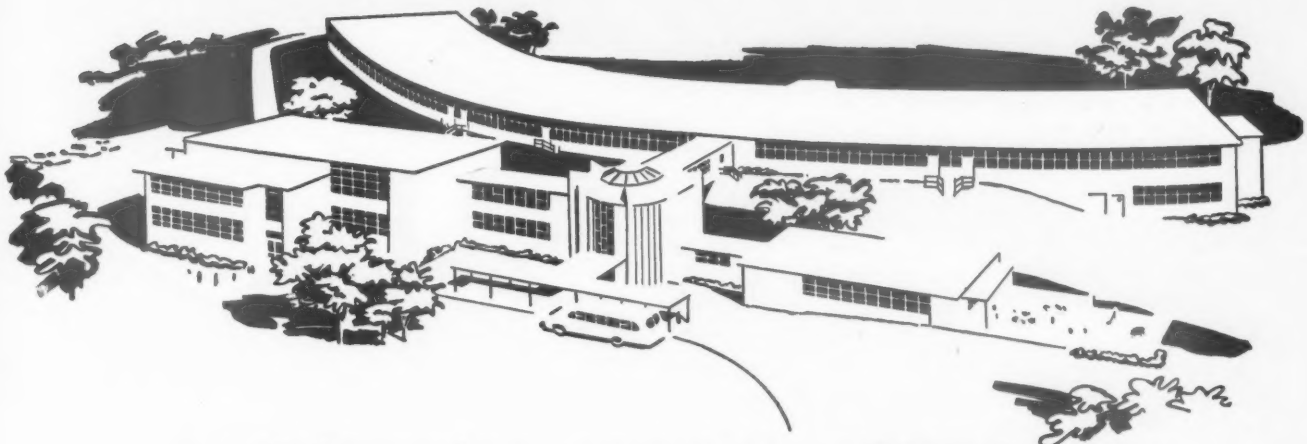
bubbler unit, (2) sliding-door cabinets, (3) open cabinets, (4) magazine racks, (5) cubicle cabinets, and (6) pull-out cabinets on casters.

*And exclusive Herman Nelson options (optional accessories, optional air conditioning) make it easy to tailor your system to fit your school budget.*

This new-color, new-function styling is available on all Nelson unit ventilator equipment—whether the equipment provides for air conditioning or for heating, ventilating and natural cooling only.



## COST DATA: LIDA LEE TALL ELEMENTARY SCHOOL



### at this price, can you afford not to provide for air conditioning?

The total heating & ventilating cost (including provision for future air conditioning) for Lida Lee Tall school was \$1.64 per square foot. This cost is in the same range as that for schools in the area that *did not* provide for air conditioning!

And when the school *does* air condition, it can do so simply by adding a packaged liquid chiller in the boiler room at an estimated cost of just 55c per

square foot — about  $\frac{1}{3}$  the cost of actually installing even the lowest-cost air conditioning system.

Now, 411 SCHOOLS have taken advantage of Herman Nelson's "now or later" air conditioning idea. They installed HerNel-COOL units at little or no extra cost, can air condition later at a great saving. At this price, can you afford *not* to provide for air conditioning?



#### Mail coupon for **FREE** herman nelson **FACT KIT** on school air conditioning

Includes information on (1) how air conditioning affects the learning environment, (2) the cost of school air conditioning (including rule-of-thumb estimates you can use in your own planning), and, (3) the equipment for school air conditioning.

*herman nelson*

SCHOOL AIR SYSTEMS DIVISION OF  
**AAE American Air Filter**  
COMPANY, INC., LOUISVILLE, KENTUCKY

School Air Systems Division, Dept. 25  
American Air Filter Co., Inc.  
215 Central Avenue, Louisville, Kentucky

- ☐ FACT KIT on school air conditioning.
- ☐ Booklet: Architectural air conditioned school designs.
- ☐ Booklet: The case for air conditioned schools.

NAME \_\_\_\_\_

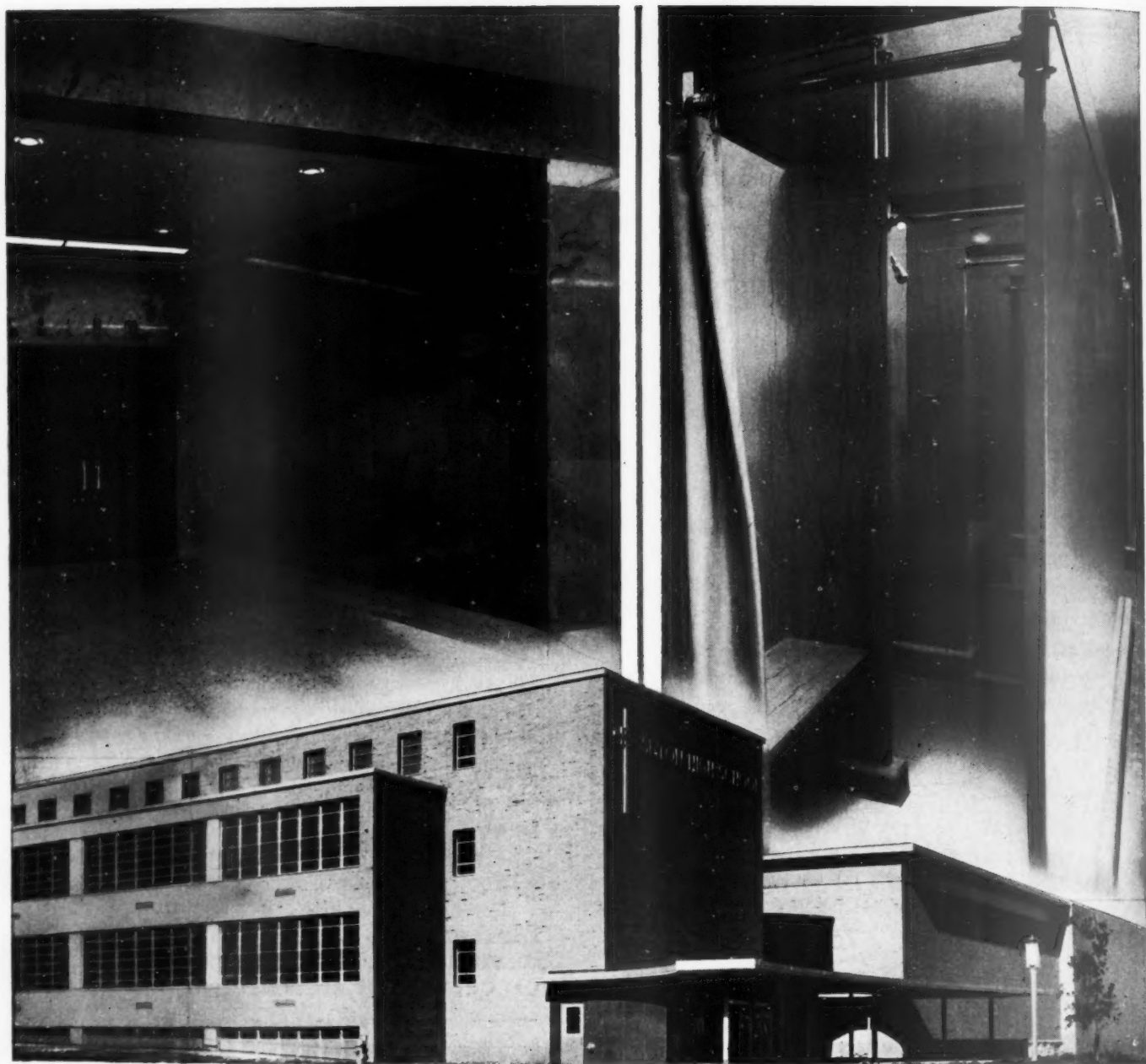
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Seton High School, Cincinnati, Ohio • Architects: Maguolo & Quick, A.I.A.

# marble COMES BACK TO THE SCHOOL . . . and with good

reason, for no other material is so appropriate for school construction as Marble.

Marble satisfies these important and basic needs: first, it is *economical*, reasonable in first cost and a source of regular annual savings because of its negligible cost of maintenance; second, it is *beautiful*, providing students, young or old, with the best of environments, an incentive to refinement in thought and action.

Write now for the profusely illustrated and highly informative booklet: "Modern School Construction, a Study in True Values," to

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cent, fluorescent and mercury lamps in detail, explains how they work and gives their principal characteristics. Also included is valuable information about illumination levels and methods of calculating the lighting requirements for given areas. Two chapters are devoted to lighting layouts, another to lighting principles and calculations and one to the use of the slide rule included with the book. This lighting calculator slide rule eases the task of novice or expert engaged in determining lighting requirements.

PRIMER OF LAMPS AND LIGHTING, by Willard Allphin. Published by Chilton Co., Book Division, 56 and Chestnut Sts., Philadelphia 39, Pa. 241 pages. \$10.

### PHYSICAL EDUCATION

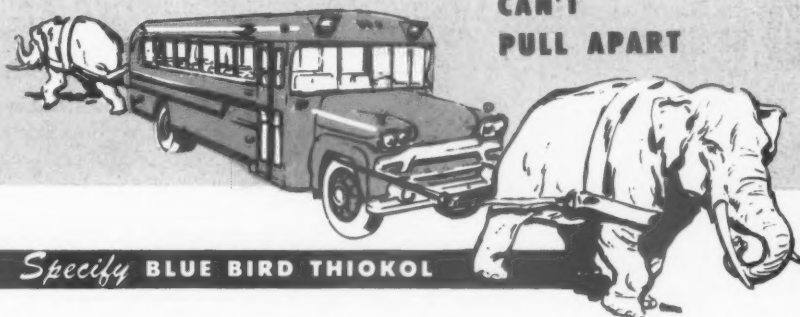
**City school programs.** This informative study covers just about every conceivable aspect of physical education programs now in effect in elementary schools of city systems. Chapters devoted to curriculum planning and program; evaluation of children's progress; time, facilities, equipment and space; and teachers—education and activities—permit the local school administrator to compare his own district's program with others around the country. Statistics are given for the amount of time devoted to daily instruction, the use of community facilities by some school systems, the kinds of equipment used by schools, the prevalence of intramural sports and summer recreation programs in many systems, the number of special teachers, consultants or specialists employed in physical education and a variety of other facts relating to city school programs.

PHYSICAL EDUCATION IN URBAN ELEMENTARY SCHOOLS. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 92 pages. 45¢.

### GUIDANCE

**For the air minded.** All the necessary study materials for those interested in entering the United States Air Force Academy are contained within this book. Entrance requirements and sample questions from the entrance examination are fully explained, as are physical qualifications and procedures for making applications. Study material is presented in chapter form and covers preparation for general science and general background tests, spatial orientation and relation tests, College Entrance Examination Board test (an integral part of the Air Force Academy test), lessons in judgment, graph, chart and table interpretation, tool rec-

## Specify BLUE BIRD



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PULL APART

Specify BLUE BIRD THIOKOL

Where is the most twisting strain on a school bus? Where is the place most likely to leak on a school bus? Where do the school bus body and the truck chassis join?

The answer to all three questions...

**RIGHT UNDER THE WINDSHIELD**

and here is where the Blue Bird RANGER has THIOKOL.

- THIOKOL is a rubbery, aluminum colored sealer that is not easily pulled apart when set in place. THIOKOL is used to help hold the body and chassis together at the point of their most twisting strain. This gives you the strength of THIOKOL instead of old type, weak rubber fillers.
- THIOKOL is used as a weather sealer in places to be forgotten in skyscrapers and bridges. THIOKOL works from 175 degrees F. down to minus 65 degrees F. This means that THIOKOL is on the job wherever you may use your Blue Bird RANGER. It will not sag, crack, or flow out once it is put in place.



THIOKOL completely waterproofs, eliminating driver complaints of wet feet on rainy days. THIOKOL forms a long lasting seal against weather to make your bus free from expensive cowl filler replacement costs.

**BLUE BIRD** Fort Valley, Ga.

The Blue Bird RANGER • Fort Valley, Georgia

Yes, I would like to have a sample of Thiokol ( )

We are going to buy new transportation equipment this year ( )

I would like to examine the actual Blue Bird Thiokol installation ( )

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Dept. 76

WATCH FOR MORE FRESH FEATURES TO FOLLOW IN THIS MAGAZINE

(Circle number 719 for more information)

ognition, mechanical insight, paragraph and reading interpretation, vocabulary as well as general mathematics.

HOW TO QUALIFY FOR THE UNITED STATES AIR FORCE ACADEMY. Published by Arco Publishing Co., 480 Lexington Ave., New York City 17. 212 pages.

## ADMINISTRATION

**Exploring professionalism.** After two years of study, a commission of distinguished administrators reports on a nationwide survey of the career pat-

terns of school superintendents, analyses present-day academic and professional preparation of superintendents, reviews programs for preparing school administrators in more than 250 colleges and universities and describes a study of the in-service growth of administrators. It begins with an actual case history of one school board's search for a new superintendent and concludes with recommendations for legal license and accreditation to assure professionally prepared administrators. In between are suggestions about the content of professional curriculum, selection of administrators,

financing students and programs, certification and accreditation, continuing education, university organizational changes and cooperative roles of educational and governmental agencies.

PROFESSIONAL ADMINISTRATORS FOR AMERICA'S SCHOOLS. 1960 Yearbook, American Association of School Administrators, 1201 16th St., N.W., Washington 6, D. C. 310 pages. \$5.

## SUMMER SCHOOLS

**New study programs.** The results of a close examination of the summer programs offered by public and independent schools throughout New England have been published in this booklet, together with an introduction to current thinking about such programs.

It suggests self-supporting summer schools to satisfy public demand for enriched offerings in science, foreign languages, English and other subjects and for the more efficient use of school buildings throughout the year.

Several of the summer programs are given in detail. Among them: Arlington, Mass.; St. Paul's School, Concord, N. H.; Newton, Mass.; Tantasqua Region High School, Sturbridge, Mass.; Andover, Mass.; and Wellesley, Mass. In addition, an appendix summarizing vital statistics of 27 summer sessions throughout New England is included.

GOING TO SCHOOL THIS SUMMER? Massachusetts Council for Public Schools, Inc., 16 Arlington St., Boston 16, Mass. 30¢.

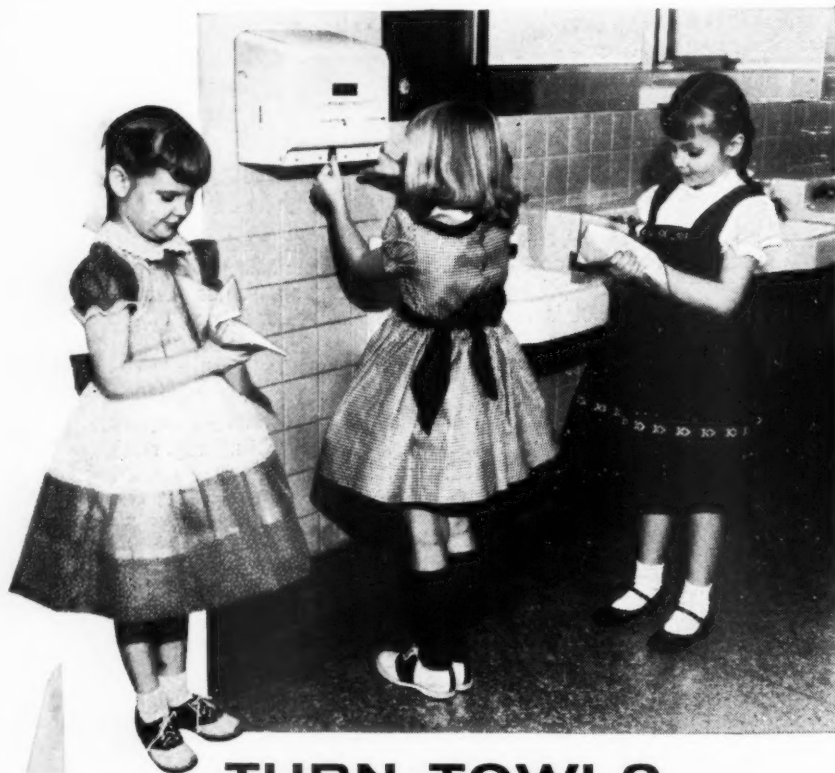
## CURRICULUM

**High school physics.** School board members interested in improving physics instruction in America's high schools will find this book, prepared by the American Institute of Physics, an invaluable reference. It discusses the initial steps to be taken in inaugurating an improved physics program, the qualifications of the physics teacher, the courses—content, difficulty and length—laboratory requirements, books and films, space requirements and how to identify high quality instruction.

Each of the chapters ends with a "things to do" section summarizing and condensing all the recommendations which have gone before and points the way toward action by school districts.

Also several solutions are provided to each of the problems encountered in teaching physics and the merits and

*continued on page 44*



## TURN-TOWLS are giving the most for the school towel service dollar!

These little girls are using the finest quality towel a school can buy — and it's costing the public just 22¢ per pupil per school year.

It's Mosinee towel quality — plus controlled dispensing — that does it. Many large city school systems that buy low quality towels on a bid basis cannot serve pupils at less than 30¢ each per year.

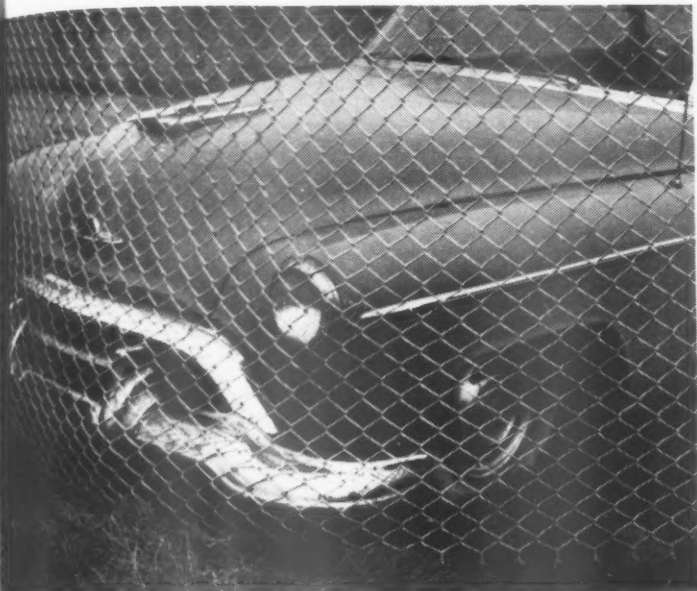
Write for name  
of nearest  
distributor



(Circle number 715 for more information)



# Tests Prove Cyclone Steel Fence Quality



**Impact Test.** A 4000-pound car, traveling at 35 miles per hour, was driven directly into a panel of Cyclone Chain Link Fence Fabric. The car was stopped. The fence did not break or fail—proof that Cyclone Steel Fence has the strength to withstand severe impact.



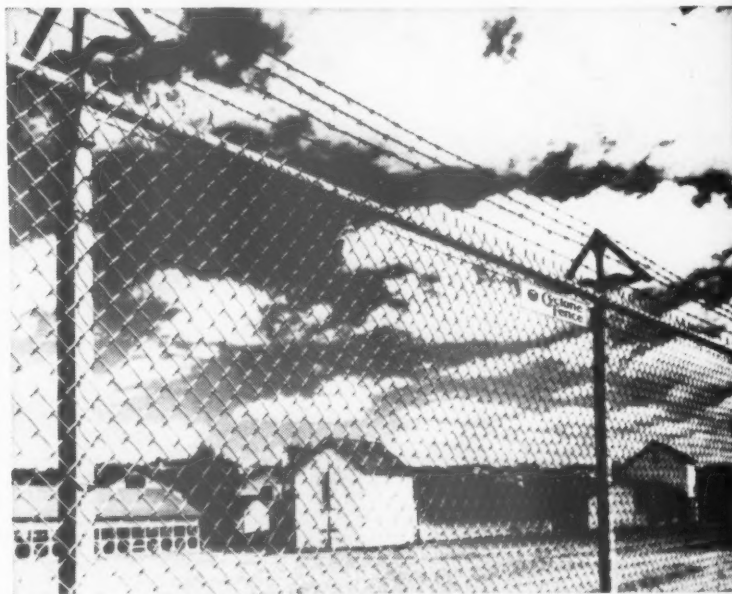
**Fire Test.** This raging fire was deliberately set to test the heat resistance of Cyclone Steel Fence . . . and that rugged steel fabric did not melt or fail. Should a grass or trash fire break out too close to a Cyclone Fence, there will be no damage.



**Corrosion Test.** More than 10 years ago this panel of Cyclone Steel Fence was installed 45 feet from the ocean. Even in this extremely corrosive atmosphere it is still strong and serviceable. Cyclone Fence owes its unusual corrosion resistance to its heavy coating of zinc.

For additional information on USS Cyclone Fence, write to Cyclone Fence, American Steel & Wire, Dept. KK-40, 614 Superior Avenue, N.W., Cleveland 13, Ohio.

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**Time Test.** The fence shown here is a 25-year-old Cyclone veteran . . . still giving good service. Once Cyclone Fence is properly installed, it requires almost no maintenance. It continues to give good service, year after year.



**Cyclone Fence Dept.  
American Steel & Wire  
Division of  
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Waukegan, Illinois, Sales Offices Coast to Coast  
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COLOR DYNAMICS offers a wide choice of effective color combinations for auditoriums. In this room a color plan of bright, pleasing hues provides a welcome psychological change from the quiet, calm colors preferred for academic classrooms.

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helps you choose colors

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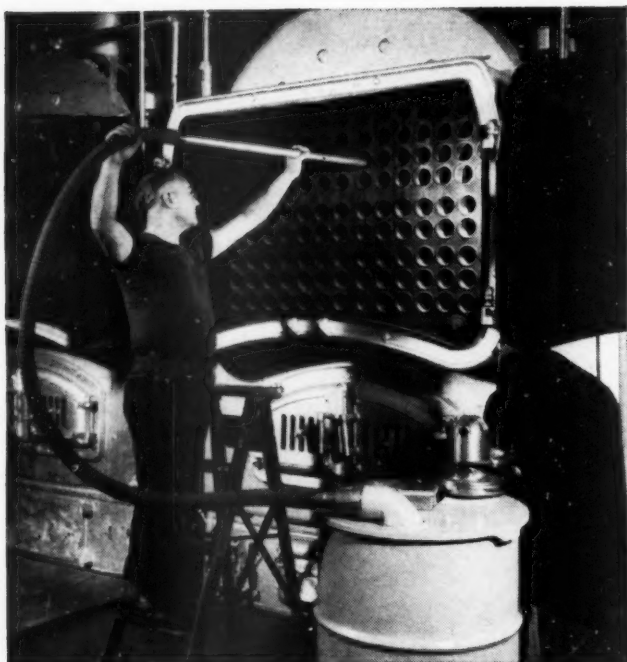
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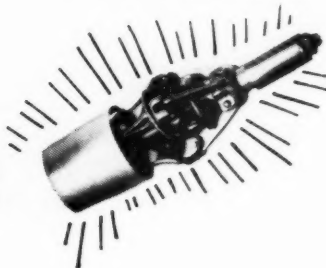
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drawbacks of each of these solutions are discussed.

**PHYSICS IN YOUR HIGH SCHOOL: A HANDBOOK FOR THE IMPROVEMENT OF PHYSICS COURSES.** Prepared by the American Institute of Physics. Published by McGraw-Hill Book Co., Inc., 330 W. 42 St., New York 36, N. Y. Paper bound, 134 pages. \$1.50.

**Soviet standards.** In order to acquaint American educators with curriculum standards in the Soviet Union, Science Materials Center has made available the final examination questions given to Russian secondary school students in major science and mathematics subjects. The 24-page booklet presents the Soviet examinations of 1958 given to students of the 10-year school—which corresponds to our high school—who go on from there to a university, vocational school or employment in industry. While the questions indicate that Russian standards are high, they do not provide a yardstick against which American secondary education can be measured since the Russian youngsters take the examinations after considerable pre-exam study of the questions. In addition, the programs of study call for considerable rote learning rather than emphasis on reasoning and analytical powers.

**FINAL EXAMINATIONS IN THE RUSSIAN TEN-YEAR SCHOOL.** Published by Science Materials Center, 59 Fourth Avenue, New York 3, N. Y. 24 pages. Free.

**Music.** Playground time can become teaching time through the use of the more than 100 games described in this book, each of which is played on a music staff marked on the playground surface. Accompanied by the bass clef, treble clef and the entire Note family, children sing and play in the land of lines and spaces forming the Grand Staff. Youngsters can soon be taught to read music with this new method approach that interprets the fundamentals of music for them through terms and activities with which they are familiar. The games—none of which require special equipment—are divided into three categories: beginning games—ages five to nine—develop rhythm and reading concepts; intermediate games—ages seven and eight—add an acquaintance with the keyboard; and advanced games—ages eight to 10—progress as far as basic chords in various keys.

**THE PLAYGROUND AS MUSIC TEACHER,** by Madeleine Carabo-Cone. Published by Harper & Brothers, 49 East 33 St., New York 16, N.Y. \$5.





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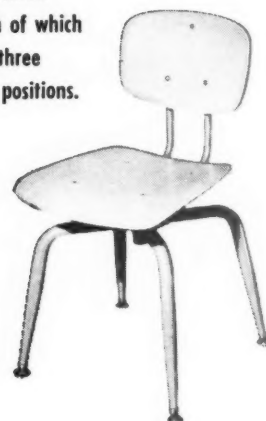


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*A digest of current happenings in public education*

### Better inspections vowed, after wall falls in

After a wall had caved in on one of the city's schools, New York City school officials announced that there would be a step-up in regular structural inspections, particularly at some of the city's more antiquated buildings.

A huge section of an attic wall collapsed on Lincoln's Birthday, a school holiday in New York, in Public School 14, an 84-year-old structure. A shower of heavy masonry crashed through skylights and crushed empty desks and chairs in two classrooms below.

The city's mayor, superintendent of schools and school board president, rushing to the scene 24 hours after the wall collapsed, declared themselves horrified and blamed the accident on the defeat of a bond referendum last November.

Although an earlier announcement had indicated that the school's students would be expected back at their desks the following Monday, it was subsequently decided to transfer the 600 pupils to another school. The damaged school will remain closed "until we do a thorough job of going over it," Superintendent John J. Theobald declared.

### Okayed text called "objective, but not too accurate."

The plight of school districts that want to use modern textbooks in history and social studies classes recently was pointed up rather sharply in San Mateo County, Calif.

The board of education there, called upon to approve a supplementary text on the Soviet Union, okayed the book, despite the fact that the committee studying it admitted that it was objective but not too accurate.

The volume, "The First Book of the Soviet Union," by Louis L. Snyder, was described as "not a terribly good book, but better than the last." Among errors found by the reviewers were maps with major rivers omitted and a 100-year miscalculation on the murder date of Grigoryi Rasputin.

A year ago the board had approved

another supplementary text, titled "Soviet Union," even though some board members felt that the text might be too anti-Russian.

The two books will be used at the seventh and eighth grade levels.

### Private catering passes test in Michigan school

Students in the junior and senior high schools of Adrian, Mich., don't have their lunches served. They're catered.

The catering service is provided by Public School Meal Management, Inc., a subsidiary of Saga Food Co., in the first experiment of private management of a public school cafeteria.

Under the set-up, the private company manages the two cafeterias for a flat fee. Federal surplus commodities

are used and no profit is made on the food.

"We hire corporations for other services," says Business Manager Louis Roberts. "It's normal that a company should operate our cafeteria."

A surprise inspection by state and federal experts resulted in a very high rating for the food and service. "The food was very good, attractively served, tasty and the conduct of the pupils was exceptionally good," Norman Teller, state food program supervisor, reported.

### Fluoridation treatments given to third-graders

Third-grade students in Lindenhurst, N. Y., are receiving free treatments of stannous fluoride, applied directly to

## Too good to miss . . .

**Measure by measure . . .** Students in Austin, Tex., are learning how to multiply measure by measure. Fourth-grade Teacher Rebecca Warden has set the multiplication tables to music on the theory that if a child misses a combination, the rhythm of the music will remind him of the correct answer. The eight tables, we assume, must be set to "Beat me Daddy, Eight to the Bar."

**Something to measure . . .** With all the testing that goes on in schools today, we really shouldn't be surprised, but . . . in Baltimore, they're keeping track of how many times a girl can jump rope in 30 seconds. Eleven-year-old Carol Yarosh holds the record, 150 jumps in a half minute. "It's really unbelievable," claims Phys. Ed. Teacher Sidney Grossman. Personally, we've never kept count, so we'll have to take his word for it.

**Measure by tape . . .** A rather touchy piece of measuring has been suggested in Ridgefield, N. J., by the father of a girl who was sent home from a wrestling match in the school gymnasium one evening because her toreador pants were deemed too tight around the ankles. Upon returning with the re-attired girl, the father saw other females in equally tight pants. Said Henry Becker, the father, "It might come to the point of having someone at the gymnasium door with a tape measure," to decide which slacks were too tight, and where.

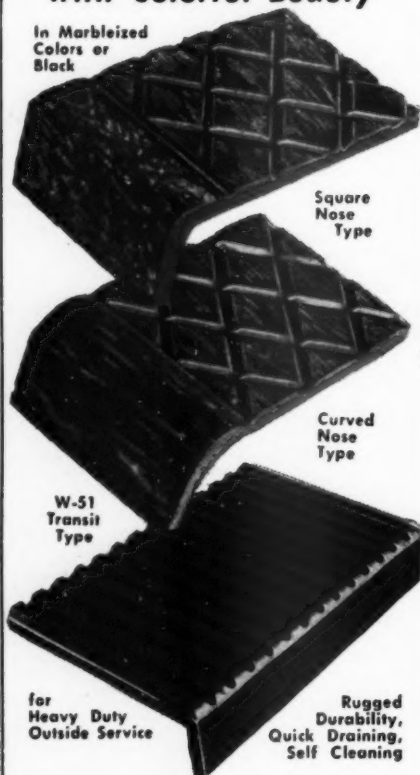
**Measure of pay . . .** And then there's the story from a Pittsburgh suburb on how to measure pay. Seems that in the middle of a discussion of merit raises for teachers, one befuddled board member came up with the obvious solution: "Merit or single," he demanded, "what's the difference? Pay 'em the same!"



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their teeth. Stannous fluoride is a compound that, according to the American Dental Association, will retard the decay of teeth.

About 900 students are involved in the project, which is being directed by the school nurse. Each child whose parents have consented to the project will have his teeth cleaned and then painted with the fluoride. Although the compound will not stop decay that has already started, it will, in most cases, prevent it from beginning.

The fluoride is being provided free by the Indiana University Medical Center. The decision to try the program with third-graders was based on dental advice that this is the group with the largest number of cavity-free permanent teeth.

According to School Board President Robert J. Little, the program is a "dress rehearsal for a future policy that may eventually go into effect in all grades except the first and second where the students do not have all their permanent teeth."

### Tree bark reducing children's skinned knees

Six elementary schools in Medford, Ore., are benefitting from a lumber industry by-product to cut down on the incidence of skinned knees.

Bark mulch, made from the bark of trees, has been used to cover the surfaces of the playground areas at the six schools. It is piled to a thickness of four inches and, according to school officials, it effectively cushions falls and tumbles.

Most of the bark is from white fir which has no splinters, no odor and doesn't track into the school.

### "Come back, little teachers" New York City schools cry

New York City is trying to lure some of its retired teachers back into the active fold to relieve a huge teacher shortage.

Of almost 35,000 teaching positions in the city schools, more than 20% are being filled by substitutes and teachers serving "out of license."

Superintendent John J. Theobald has suggested that teachers between the ages of 55 and 70, who are physically fit, return to full-time service. He estimates that the system might be able to obtain 500 to 1,000 fully qualified instructors from this group.

Fly in the ointment is New York

### Stop, thief

*In Pullman, Wash., the director of the Washington State University library reported that a thief had stolen a single article from a book. The title of the article was: "Cheating—How it can be stopped."*

*But Washington's problems are nothing compared to those of school officials in Pierre, S. D. Police there have asked the schools to stop locking their safe at night. The reason: Burglars ruined a \$4,000 school safe in order to obtain \$20.*

State's teacher pension laws which set an income cut-off point of \$3,600 annually if full pensions are to be paid to retired teachers. According to the superintendent, many retired teachers do work as substitutes now, but quit before the end of the school year when their earnings threaten to go over the maximum allowed.

Under Theobald's plan, teachers would be allowed to return to their jobs at about three-quarters of their maximum salary when they retired. Pension payments would not be affected. In order to carry through his plan, however, it will be necessary to get the state legislature to amend the pension rules.

Since New York City and the state government are under the control of opposing political parties, it seems unlikely that the necessary pension law changes will be made.

### Federal aid splits Arizona school boards

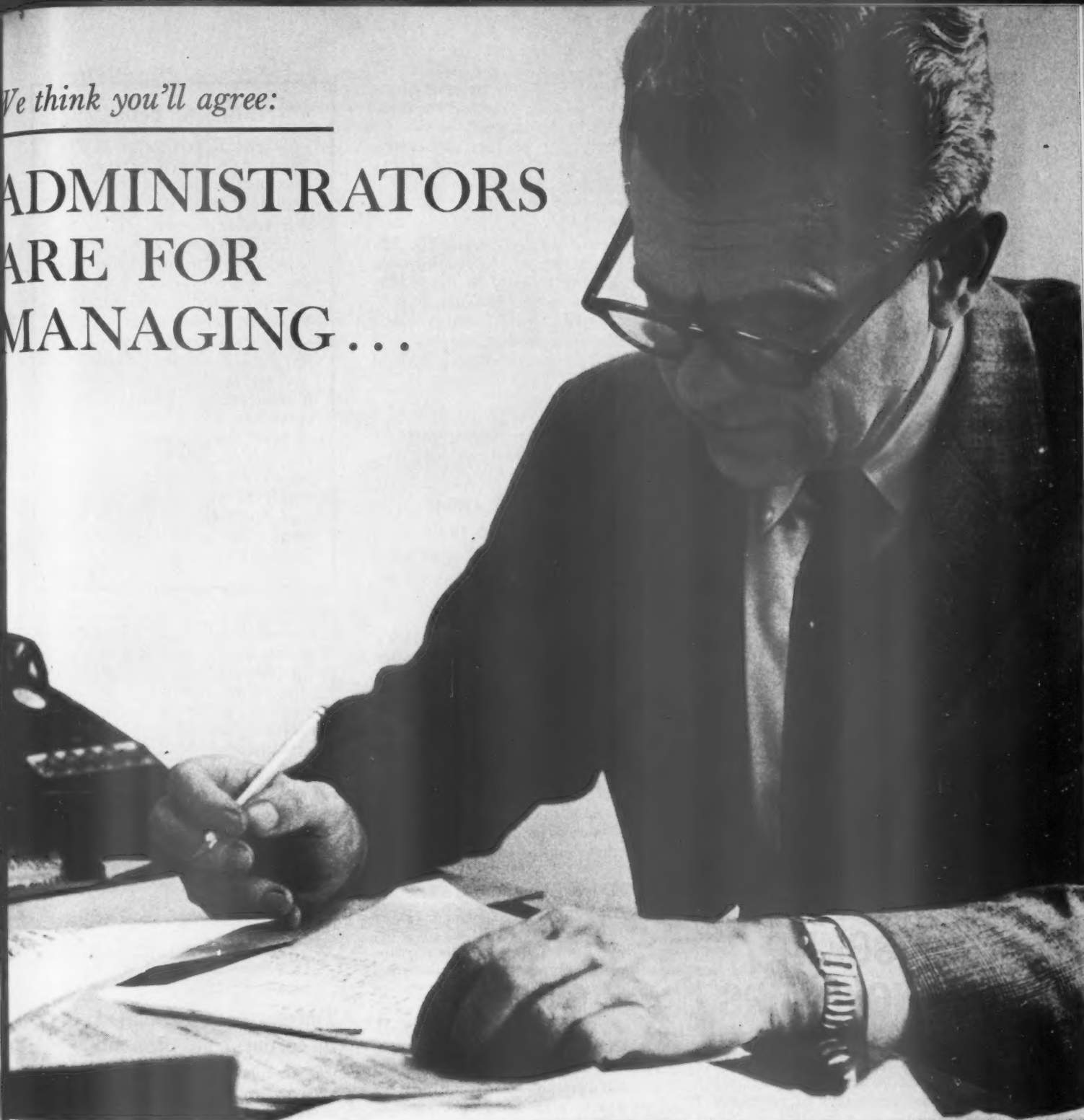
A debate on federal aid to education threatened to split the Arizona School Board Association wide apart. At its recent annual meeting the association passed a resolution opposing federal aid as outlined in the 1958 National Defense Education Act.

But Phoenix Board President Trevor G. Browne, writing in his district's newsletter, indicated the depth of the split in association ranks when he said: "the foes of federal aid had the meeting under control and put across a motion that no debate could be held on the resolution."

Browne continued: "There were more smooth parliamentary maneuvers by the Tucson clique which threw the chair into much confusion . . . The delegate from this district was not

*We think you'll agree:*

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rate, up-to-date records and reports for virtually every school function. Multiple copies of report cards for office and counselor use, permanent records, student rosters, class rolls, grade analyses, and rapid class scheduling are provided the administrator. Result? His clerical load is reduced. He can analyze and improve his total operation. All this without investment in equipment or additional personnel.

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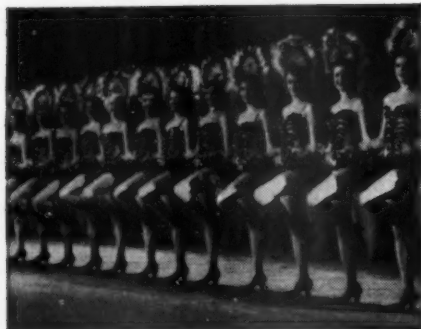
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permitted to make any observation on the subject of federal aid. As a result he abstained from voting."

Browne suggested that debate was cut off because "they were afraid they could not keep their people in line if they heard too much from the other side."

"A curious sidelight—since the Arizona School Board Association was put into being recently by the legislature, it is now subject to state control," Browne stated. "Not a word was said about this unwarranted creeping state control. The uproar was on federal control."



### You take the high road; students will choose their own

You may take the high road while we take the low, but today's students are taking their own roads—low and high.

In Pittsburgh, nine-year-old Jackie Vavrek took the long road home when his report card wasn't up to par. Kept his family and neighbors out half the night looking for him, while he hid under a porch.

Three twelve-year-olds in Dallas, Tex., took the road to the zoo and ended up in the police station. The three—two with bad report cards—had run away from school but got hungry and decided to give themselves up.

Students in Decatur, Ga., knew just which road they wanted to take. Given the choice between a tour of the state capitol and an industrial plant, they unanimously chose to follow the road to the factory. Reason: It's a potato chip plant that gives out free samples. The Texas boys should have gone along (see above).

And talk of the high road, two rock-et-minded boys in Toledo, Ohio, are on probation after stealing chemicals from a high school storeroom. They were discovered when the mother of one saw a jet-propelled detergent can buzzing through her kitchen.



### Montana school board bans smoking, carrying tobacco

The school board of Kalispell, Mont., has passed a resolution making it illegal for students to smoke or carry tobacco when they are on the school grounds.

The board has authorized adminis-

### How's he doing?

*School authorities in Lindenhurst, N. Y., jaded by questions from worried parents about their children's progress, swear this is a true story.*

*Howard Shineman teaches advanced math in high school and an evening adult education course leading to a high school diploma. He was approached recently by a math student. The boy looked worried, which puzzled the teacher because he was a good student. Then the story came out.*

*"Tell me frankly," the boy said, "How is my father doing in your evening class? I know how much the diploma means to him and I wondered if there's anything I can do at home to help him with his courses."*

trative officials to "take such action as is necessary to eliminate the carrying of cigarettes and tobacco and the smoking thereof by students on the school grounds or in the school buildings."

Parents of offenders will be notified by school authorities and the names of minors possessing tobacco will be turned over to local law enforcement and juvenile officials.

The school board also called on local law officers to assist in the anti-tobacco campaign by cracking down on the sale or gift of tobacco and cigarettes to minors.



### Teacher liability studied in corporal punishment

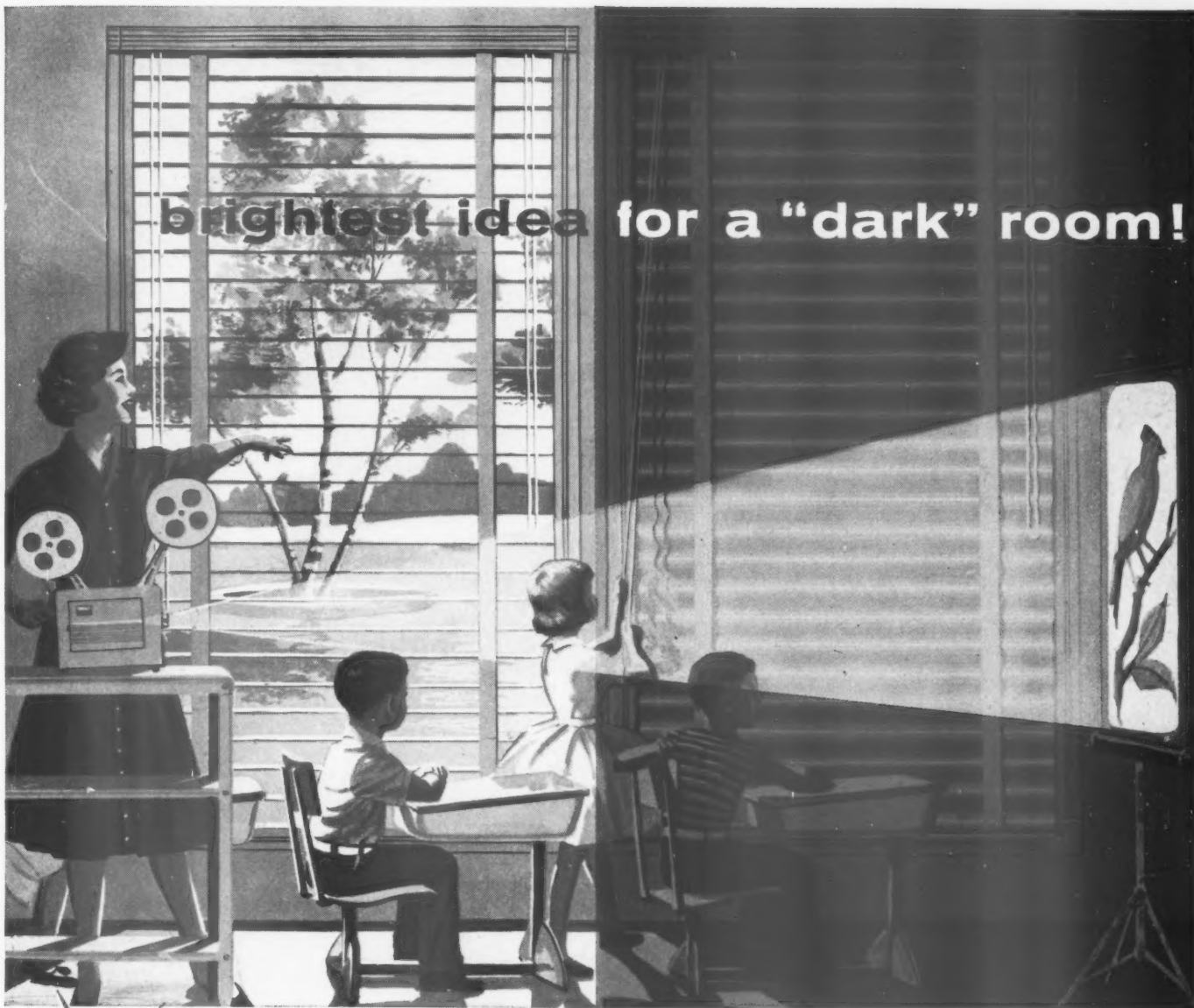
A state law that requires municipalities to protect employees financially from suits arising during normal performance of duties has raised a spanking new—and rather troublesome—question in Hartford, Conn.

Since the school board has approved corporal punishment under certain conditions, this is a normal duty of teachers. But present city insurance covers teachers for such cases as negligence actions arising from accidents in the classroom but not from suits that might arise from bodily punishment, such as physically chastising a pupil.

The city's insurance advisor has counseled against coverage for corporal punishment cases because the school's Superintendent Robert H.

*continued on page 53*





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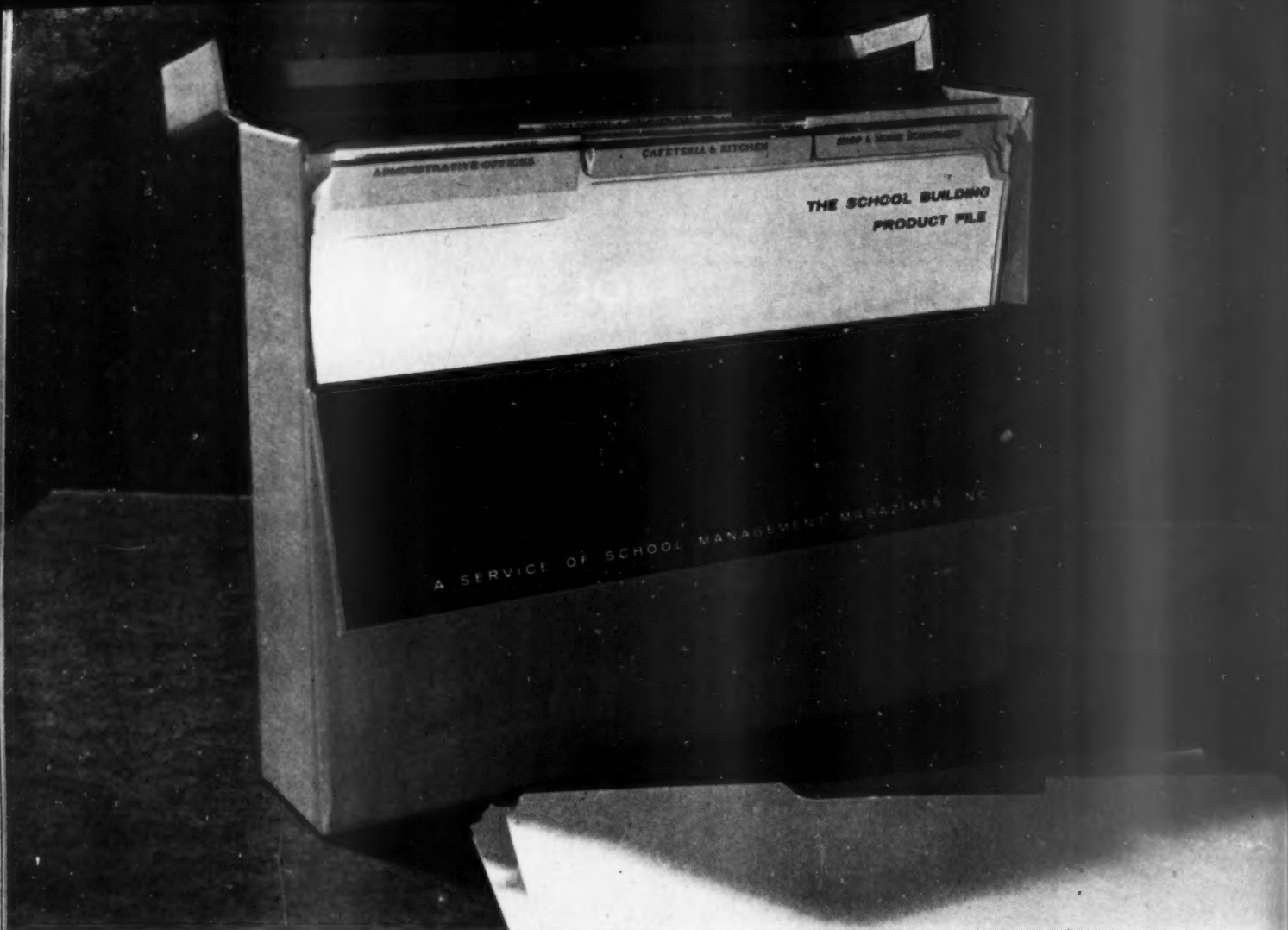
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Each File contains about two dozen folders covering the major products and areas involved in your new school. In the folders you'll find the most recent product literature produced by leading manufacturers of building materials and school equipment. Unlike a bound "catalog," this flexible File permits you to maintain all of your written and printed material in an organized and compact package.

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***If you have a school under construction,*** the same officials will receive free Files approximately six months before your estimated date of completion.

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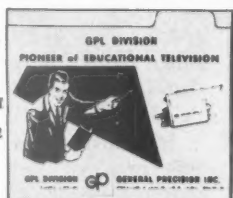


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APRIL 1960

Black has warned that it would be "license for legal assault and battery."

On the other hand, under current board policy, teachers are being asked to perform a duty which might well result in legal action, but no coverage is being provided. The whole corporal punishment and insurance policy will be up for review during this spring's board meetings, but meanwhile it remains a whopping big problem for the administration, board and teachers.

## Driver license issuance school issue in Utah

Does successful completion of a school driver training course automatically entitle a student to a driver's license? That is the question at the bottom of a dispute that has broken out in Utah between the state department of public safety and school officials.

The duty to determine who is fit to hold a driver's license rests with the driver's license division of the state department and not with high school driving instructors, according to Dr. Vaughn L. Hall, state school office director in charge of the driver training program.

George C. Miller, licensing division director, had complained that high schools were passing poor students from their driving training classes. Dr. Hall answered that Miller was right in that a few relatively poor students have been passed in the course but he pointed out that Miller's agency has the legal duty and responsibility of determining who is fit to hold a license.

Dr. Hall urged that examiners pay no attention to the fact that a person had passed the course. He is preparing a new plan to present to the state board of education to make it easier for high schools to flunk poor driver training students. In Utah, schools receive financial assistance for students taking driving instruction and are reluctant to remove a student from a class or flunk him if it would mean that the school would lose money it had invested in the student's training.

## Schools backed in right to determine entrance age

The Montana Supreme Court has upheld the right of school boards to enforce reasonable admission cut-off dates for six-year-olds.

The case arose when a lawyer, whose daughter turned six three days

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after the cut-off day selected by the Lewiston, Mont., schools, cited a clause in the state constitution that declares: "The public free schools of the state shall be open to all children and youth between the ages of six and 21 years . . ."

Choosing a literal interpretation of the constitution, Lawyer Donald E. Ronish demanded that his daughter be admitted to school on the day she turned six. A district judge upheld that point of view but has now been overruled by the state's highest court.

This is only the second time in judicial history that a court has ruled

on the constitutionality of individual school boards setting a cut-off date for admissions. The Montana legislature has never set such a limit.



### The Bill of Rights penetrating classrooms

Sparked by a non-profit foundation, the Bill of Rights—the first 10 amendments to the U. S. Constitution—is being utilized in classrooms across the country as a teaching aid. The Ameri-

can Principles Foundation of Houston, Tex., has reported that about 60,000 copies of the document have been donated to some 4,000 school districts across the nation.

An independent grocer in the Houston area was one of the first donors, giving 60 copies of the Bill of Rights to the Galena Park schools. The two-by-three replicas, printed on parchment, are being used in social studies classes.

In Buffalo and Niagara Falls, N. Y., The Marine Trust Co. of New York has distributed 1,000 copies of the Bill to public and parochial schools. Similar distributions have been made in Hawaii (by the Bank of Hawaii); Pittsburg, Kan., and El Paso, Tex. (Prudential Insurance Co.); and in four Louisiana parishes (Calcasieu Marine Bank).



### Misbehaving student finds self boxed in

A smart-alecky 16-year-old student in Dayton, Ohio, recently found himself badly overmatched in a boxing bout with a school teacher.

The teacher, Phillip Brock, challenged the student to a boxing match after he refused to leave a gymnasium when ordered to do so. The student had been heckling students and throwing paper during an eighth-grade basketball game and was asked to leave.


When he returned, a short time later, Brock told him to leave again. The student cursed Brock and refused to leave, whereupon the teacher challenged the student to put on the gloves and meet him in a boxing match.

Although both contestants weighed the same, the match lasted just long enough for Brock to get in five or six solid blows and for the youth to cry "uncle."

Brock's actions were backed by Principal Robert Erbaugh who said "I feel the teacher was justified in what he did." Erbaugh described the student as defiant toward the teaching staff.

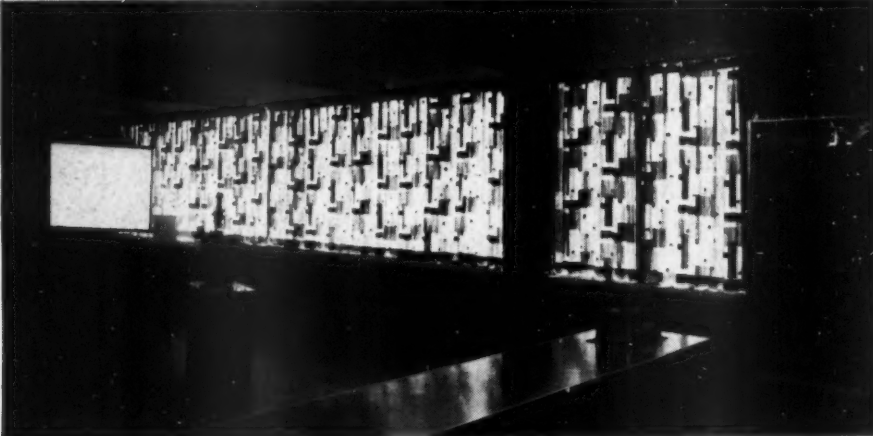
Superintendent Robert B. French pointed out that "the law says a teacher has the authority of parents while a child is in school. Thus a teacher may spank. The question of boxing is another thing." French said he had not decided what—if anything—he would do about the matter.

It's hard to tell what the outcome of this incident will be, but from our vantage point, we can see a teacher having some trouble trying to "spank" a 16-year-old "child." But if the child thinks he's man enough to try his hand at the manly art, well, why not?



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## Questions and answers about teacher utilization

The teacher shortage can be eliminated by “growing” more teachers or making better use of the ones we have. Here, Dr. J. Lloyd Trump tells how teachers will be used in the future and outlines the steps administrators can take today to improve the utilization of their teaching staff.

■ ■ ■ The teacher shortage is the single greatest problem facing America's schools today.

Overcrowded classrooms, inadequate facilities, high tax rates and lack of money are minor annoyances compared to the dearth of qualified teachers.

And yet, while school boards, teachers and administrators push boldly ahead in their efforts to solve other problems, many, if not most, are dragging their heels on finding ways to come to grips with the biggest issue.

Consider the magnitude of the problem. Figures just released by the Office of Education show that there are 1,367,000 full and part-time teachers employed in our schools. Of these, almost 100,000 hold sub-standard licenses. With more than 35 million students in the public schools, the Office estimates that 1,562,000 fully qualified people are needed to teach them. That means that we lack almost 200,000 teachers of any sort at the present time. And, if unqualified teachers are to be eliminated from our classrooms, 300,000 new teachers

must be found. That's almost 25% of the present total qualified teaching force.

What are the possible solutions? One is obvious. We can manufacture more teachers. Unfortunately, however, this cannot be done overnight or on an assembly-line basis. Bringing new people into the field is, at best, a long-range answer. At worst, the prospects are that new teachers will hardly keep up with the still-growing student population.

Another solution that has been suggested holds far more promise for the present. This approach, which has come to be linked with the name of Dr. J. Lloyd Trump, now associate secretary of the National Association of Secondary School Principals (NASSP), is dependent on finding ways to better utilize the time of the teachers we now have—to spread them thinner.

For the past three years Dr. Trump has been directing the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School. The



Commission was appointed by the NASSP and is supported by a grant from the Fund for the Advancement of Education.

#### **Pie in the sky?**

This Commission has not been looking for theoretical "pie in the sky" answers to the teacher shortage. Instead, it has based its work, and conclusions, on experiences that have occurred in schools in the past and new experiments the Commission itself is sponsoring at the present time. (*see page 60 for reports on some of the studies in better utilization of the teaching staff that are now underway.*)

Although the methods—and to some extent the results—differ in each case, the programs are all aimed at the same target: reducing the teacher shortage by making better use of teacher time in professional jobs. Collecting money, supervising study halls, taking attendance, repeating lectures, setting up laboratory experiments and correcting objective tests were all considered areas where persons with less professional training could aid the teacher. And, it was reasoned, if the teacher were relieved of some of these unnecessary duties, she would have two advantages:

1. There would be more time to teach.
2. Perhaps most important, there would be more time to plan for *better* teaching.

If true, what this means in terms of the teacher shortage is rather obvious: The number of teachers needed would be decreased. At the same time, the quality of teaching would be increased. And, very possibly, the cost of teaching might be decreased.

#### **Trump in a nutshell**

About a year ago, basing his conclusions on the experiments underway in schools across the nation, Trump wrote "Images of the Future,"\* in which he tried to predict some of the changes that would take place in the next few decades.

What does he see? Basically Trump sketches a revolutionary change in two areas—the organization of the curriculum and the instructional staff. These two major changes will, of course, bring with them revisions in student-teacher relations, administration, facilities and school-community relations.

#### **Instructional groups**

According to Trump, a student in the future will spend approximately 40% of his time in large-group instruction; 40% in individual study and 20% in small-group discussions.

**Large group instruction** will include a number of activities carried out in groups of 100 or more. Instruction and discussions will be conducted by teachers who are particularly competent, who have adequate time to prepare their presentations, and who will be able to utilize the best available instructional aids.

The person conducting large-group sessions will be expected to introduce subject matter, explain why the subject is being studied and help plan future study. He will present material not readily available in texts and

summarize general concepts that can be applied in many situations.

**Individual study**, Trump states, will take up a large proportion of each student's time. Students will engage in study activities as individuals, or in groups of two or three, with a minimum of constant supervision. Teachers will serve more as consultants than task masters. Under this system, students will be required progressively to take more responsibility for self-direction. The amount of time spent in individual work will vary from subject to subject, and according to the maturity of the particular student.

**Small groups** of 12 to 15 students and a teacher will examine terms and concepts, solve problems and reach areas of agreement and disagreement. This is seen as primarily a student activity, with the teacher sitting in only as counselor, consultant and evaluator.

The class of 25 to 35 students—so frequently found in today's schools, and often highly esteemed—will have no place in Trump's secondary school of tomorrow. A class of 25, he says, is unnecessarily small for large-group instruction. Not only is the size financially uneconomical, in his view, but it means "deadening repetition for teachers who must go over the same material for several sections." But the class of 25 to 35 is too large for effective study or discussion. Discussion groups, he claims, must be held to 12 or 15 to be really effective.

#### **Teacher organization**

The high school of the future, as visualized by Trump, will have a whole raft of new titles. **Professional** teachers will be broken into two groups: those who are **teacher specialists** and those who are **general teachers**. Also on the faculty will be instruction assistants, clerks, general aides, community consultants and staff specialists.

**Teacher specialists** are designated as experienced teachers who demonstrate career interests and abilities. They will have advanced training and will be responsible for overseeing all the instruction in a given subject. Most often these specialists will teach subject matter, in which they are particularly well qualified, to large groups of students. They will also serve as consultants to individuals and small groups of students and will be experts in the use of various teaching aids, such as television, teaching machines, etc.

**General teachers** will be qualified, certificated persons with less experience than teacher specialists. They may be persons who do not plan to make a career of teaching or whose family responsibilities or other interests prevent their giving full-time, uninterrupted service to the schools. These teachers will generally be assigned to small groups and individual students, not because this work is any less important than lecturing—it isn't—but because it takes less daily preparation by the teacher. Thus, differences in individual ability, time, preparation and energy will be recognized as they cannot be today. In the high school of the future, there will be one professional teacher—general or specialist—to every 40 students.

To assist the professional teachers, there will be a group of technicians, called **instruction assistants**, who will do specific parts of the teaching job. Instruction assistants will carry out such tasks as reading and eval-

\*IMAGES OF THE FUTURE, By J. Lloyd Trump. Published by the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School. Order from National Association of Secondary School Principals, 1201 16th St. N.W., Washington 6, D. C. Free.

uating *some* English themes, science reports, social studies essays, mathematics exercises and other types of student papers. They will evaluate and criticize some student work in art, mechanical drawing and other phases of creative and practical arts. These will be carefully selected and highly trained people who may, in some cases, even instruct. Each professional teacher will have an assistant about 20 hours a week.

**Clerks** will do such routine jobs as copying materials, operating duplicators, handling supplies, grading objective tests, and keeping records. A professional teacher will have about 10 hours of help each week.

**General aides** will supervise students in such large areas as the school grounds, cafeterias, corridors, auditoriums and large meeting rooms. Although not so well trained as the instruction assistants, it is expected that they might sponsor some extra-class activities when they have the willingness and training to do so.

**Community consultants** will be members of the community who have special qualifications which they are willing to make available to the schools. Generally these people will be volunteers but, on occasion, it may be desirable to employ them for a series of programs.

**Staff specialists** will provide guidance, research, health and other such services.

#### No final plan

In introducing his ideas, Trump noted that "a superior school today may be an inferior school a decade from now—unless bold imaginative steps to improve *quality* are taken. . . . The purpose in making these proposals is *not* to establish a final plan for the school of the future. The hope is rather to stimulate imaginative research and developments aimed at improving organization and staffing in secondary schools. There is a complete awareness that unforeseen developments could invalidate some of these proposals."

The Trump report has become the focus of attacks from almost every position on the educational spectrum. Teachers find it a threat to their jobs. Many administrators prefer the *status quo*. Some see it as putting too much emphasis on bright students and academic work. Others have opined that there is too much opportunity for frills to be put into the schools. It has been charged that Trump is suggesting mechanized teaching as envisioned by George Orwell in "1984."

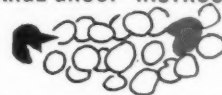
There are elements of truth in all of these accusations and yet none are really true. Most are based on a failure to read Trump's proposals or an inability to understand or accept them. It needs to be repeated that neither Trump nor anyone else on the Commission has suggested that the proposals presented in "Images of the Future" are final, binding ones that cannot be altered. It is clearly stated that they are simply *ideas presented to point a direction* for secondary schools.

Because of the great controversy that has raged about the book and its proposals, SCHOOL MANAGEMENT contacted Dr. Trump and asked him to explain his ideas, answer some of the questions of his critics, and tell more about what he sees for the high school of the future. The following interview is taken from a tape-recorded question and answer session held in February.

*continued on page 60*

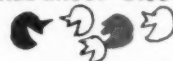
## HOW A STUDENT

### LARGE-GROUP INSTRUCTION



Various subjects, activities, and length of periods—12 hours.

### SMALL-GROUP DISCUSSION:



Various subjects, activities, and length of periods—6 hours.

### INDIVIDUAL STUDY:



Various subjects, activities, and places—12 hours not including time on Saturday and after 3:30 P.M.

## HOW A SCHOOL

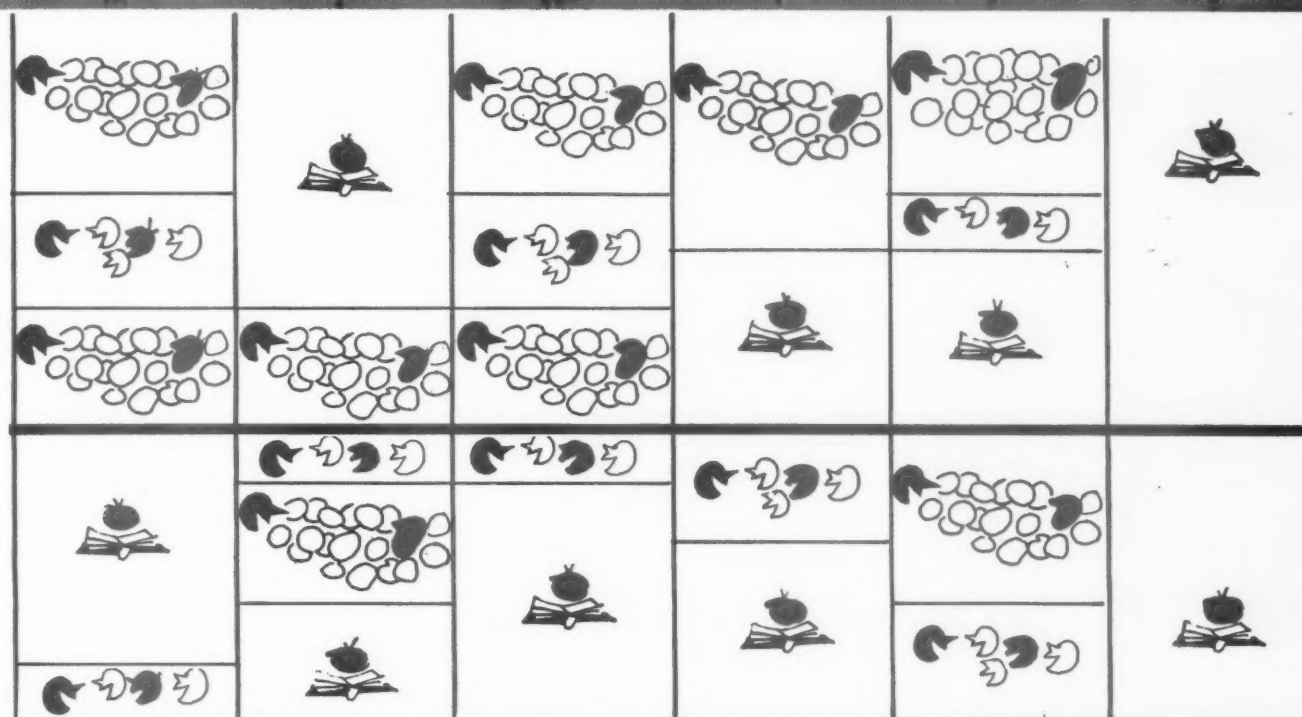
### PROFESSIONAL TEACHERS



10

**These two charts** graphically illustrate the manner in which students might spend their time in the high school of the future, and the type of teaching staff necessary to work with them. Top chart shows schedule of a student

## MIGHT SPEND HIS TIME



## OF 400 MIGHT BE STAFFED

### INSTRUCTION ASSISTANTS



5

### CLERKS



2.5

### GENERAL AIDES



1.25

### COMMUNITY CONSULTANTS



INDEFINITE

### STAFF SPECIALISTS



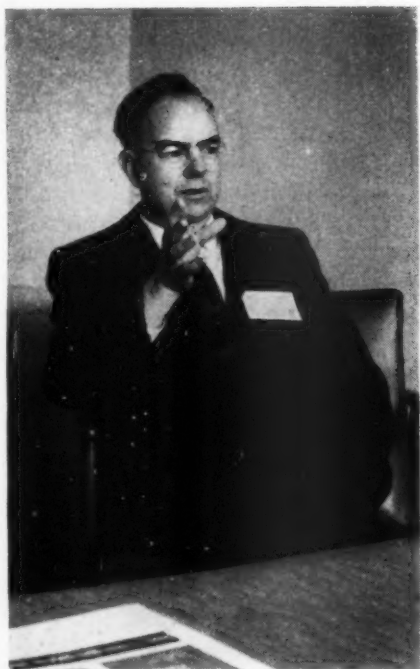
INDEFINITE

who attends a large-group instruction session Monday morning, then participates in a small-group meeting and another lecture before spending a good part of his day in individual study. He finishes his day with another small-group meeting. Note that the student is involved in all

three kinds of study every day, with the exception of Saturday. The bottom chart shows the instructional staff for a school with 400 students. Pictured are the 10 teachers and approximately nine other staff members who would be available to assist them with certain jobs.



*"When you come right down to it, we're holding up to question almost everything that an administrator has been doing all his life."*



**Q Mr. Trump, just what is your definition of utilization of staff? What does it mean?**

TRUMP: We simply mean making the best possible use of the professional competencies of teachers. We're trying to make it possible for teachers to become professionals in their business. I maintain that our school system, as it's presently organized, makes it impossible for them to be truly professional. We don't get enough professional work from an average teaching staff.

**Q.** Then better staff utilization, in addition to redirection of teaching skill, also means what might be called "speed-up"?

TRUMP: No, not at all. As a matter of fact, it might be quite the oppo-

site. We think that at the present time teachers are scheduled too many hours a week with groups of students, or with non-professional chores. We want to reduce those hours so that they have more time to be professionals—to prepare and develop educational materials.

**Q.** If this is all you've been trying to do, why is there resistance on the part of so many school administrators to the ideas you have been advancing?

TRUMP: I think there is a natural resistance growing out of concern about how to do the job. We're talking about some pretty basic things. We're talking about how an administrator manages a school. For instance, we have said that the whole concept of scheduling needs to be changed. This means changing the

## How to get more teaching time for teachers

*Here are reports on some of the experiments in better staff utilization being conducted in schools across the nation. All are under the aegis of The Commission for the Better Utilization of the Staff in the Secondary School.*

■ **Team teaching** at Roosevelt Junior High School, Duchesne County, Utah, brought to students an opportunity to study under teachers specially trained in several areas. Under the experimental program, the eighth grade was scheduled for one two-hour block of time for English, United States history, and personal citizenship. A team of four teachers—with the school librarian and principal—was assigned to work together during a *three-hour* period each day. Teachers used one hour for planning, the others for actual classroom instruction. Tests administered to students involved in the experimental class, and to control groups in other schools, indicated that the Roosevelt students had a higher achievement than those taught with traditional methods. Teachers found that they had more time to utilize in preparation of materials, that they were able to better utilize specialized training, and that they gained by working closely together. After a year with the experimental program teachers and administrators asked that it be continued and expanded into other areas of the curriculum.

**Student aides** are serving the chemistry department of an Arlington Heights, Ill., high school. Used as laboratory assistants, the students set up lab and demonstration materials,

assist in demonstrations before the class and with individual experiments, help clean equipment, answer questions, and grade objective tests and daily exercises where no personal judgment is involved. The program has relieved teachers of many responsibilities that had previously consumed time in which they could have worked with individual students. The student aides are all graduates of the chemistry course with which they are helping.

Another experiment in the use of **student aides** in the same school district has proven very successful. In this case two selected students were assigned to help out in a freshman remedial arithmetic class, rather than attending a study hall. The two students took over many of the tasks of drilling students in areas where weakness had been pinpointed by the teacher.

**Lay supervisors** for study halls have been utilized in the same school district with excellent results. The persons employed were retired persons living in the district. They proved more than adequate to handle a study hall assignment, keep order and answer routine questions. Their presence made it possible to relieve teachers of this duty.

**Tape recordings** were used in the J. Sterling Morton High

bell system, changing the length of periods. We are doing violence to the concept that all teachers should be treated alike in terms of salary policies, teaching load, and so on. We have also said that many of the existing school buildings should really be remodeled and that new ones should be built quite differently. When you come down to it, we're holding up to question almost everything that an administrator has been doing all his life.

**Q.** Then you're asking people to accept a revolution—to throw away some basic concepts that, for better or worse, seem to be educating children.

**TRUMP:** That's right! I worked too many years myself as a principal not to understand that. But we have also said repeatedly that our schools have done a good job as far as the original goal of American education is concerned. In the nineteenth century we mounted the greatest educational revolution the world has

ever known. We set out to teach everybody to read and to write and to give them a basic education. No one had ever done this before. This was a tremendous revolution, questioned violently by many, many people. Now we've done that job and we face what I think is another educational revolution. We must now take all these people to whom we're offering an education and not only teach them fundamental skills, which we have done and which we need to continue to do even better, but above that to recognize the tremendous individual differences that exist, and to permit some students to go far deeper. We need to challenge the creativity of all our students much more. But remember, when we suggest doing this, we are upsetting a very comfortable *status quo*.

**Q** **Let's examine a few of the specific recommendations you make**

**in "Images of the Future." The most fundamental one is probably wrapped up in this statement: "The high school of the future will be organized around three kinds of activity—large-group instruction, individual study, and small-group instruction." You go even farther than that. You say that the student's time will be broken up in a certain way: 40% in large groups, 40% in individual study, and 20% in small groups. What has this to do with staff utilization?**

**TRUMP:** Teachers now actually waste time and energy by repetitiously presenting things to unnecessarily small groups. Why should you  
*continued on page 128*

School, Cicero, Ill., to teach beginning Italian when there was no available language teacher with competence in that subject. A trained teacher produced lessons on tape. A language teacher who did not speak Italian, but who knew how to utilize tape recordings, taught the subject to beginning students. The two teachers conferred regularly—in English—adjusting their course as the term progressed. Although there was a great deal of teacher opposition to the idea when it was first started, most of it was overcome and the program was a success. It is continuing into a second year.

**Teacher aides**, as part of a teaching team, have been tried in San Diego's public schools. In one case, drama classes of 50 to 55 students were handled by a certificated teacher (designated the team leader) and an aide who lacked a teaching certificate. The aide was employed for four hours daily. The teacher reported that he was able to expand the learning experiences he could offer by 50% over what he had been able to accomplish in a regular class. Make-up techniques and stage design were added to the course. The teacher stated that team teaching had presented him with one of the first opportunities in his teaching career to spend an uninterrupted hour during the school day with small groups of students.

**Large class instruction** in general science was undertaken in the Glenbrook, Ill., high school under the direction of a teacher and a qualified aide. The teacher was concerned only with teaching, while the aide handled all routine involved in the course. It was found that the teacher had more time for preparation of materials, that tests were returned faster (grades were better), and absentee work was completed quickly. After a year with the program it was

concluded that a class of 45 students can be taught better on the whole with a regular teacher and an aide than a regular class of 28-30 with one teacher. In other words, two teachers with aides can do a better job with 90 students than can three regular teachers.

**Radio lectures** are being utilized as part of the guidance program in South Bend, Ind., in an effort to provide more time for individual conferences.

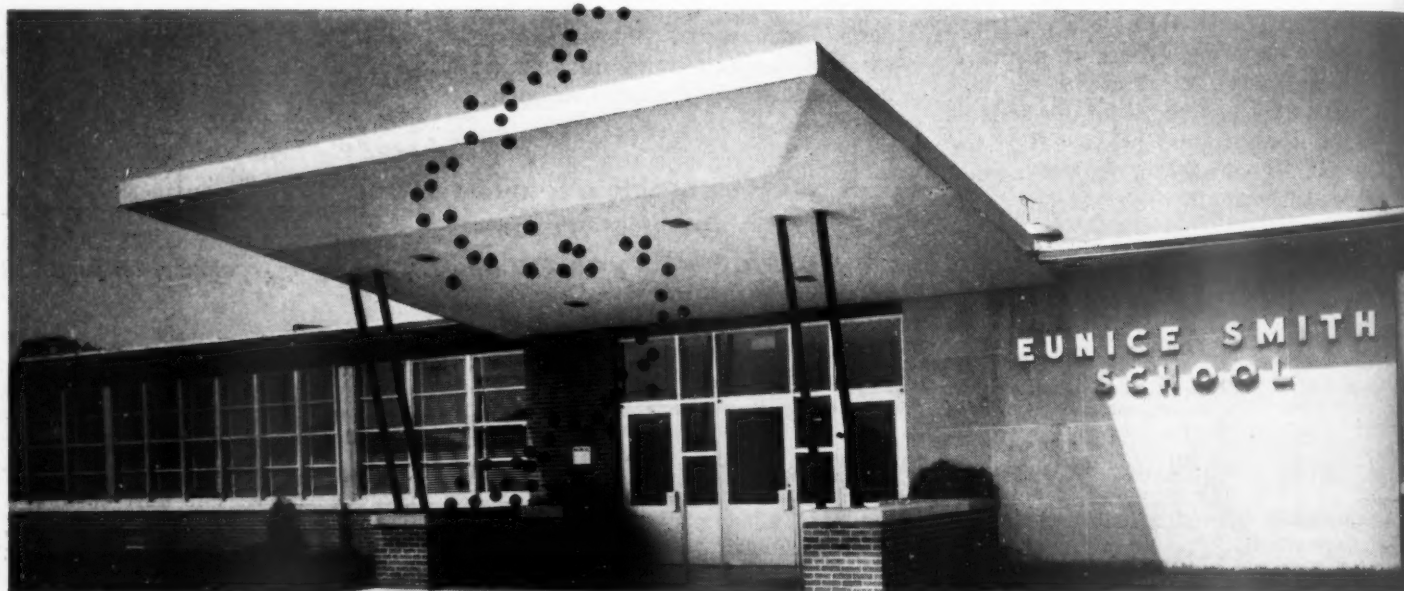
Under the previous guidance program, each student attended a group guidance class once a week during the second half of each grade. Although the program itself worked out very well, preparing and presenting a whole series of lectures took a lot of the guidance counselors' time and left them little opportunity for individual work. Often teachers had to be asked to give the group sessions.

By utilizing radio broadcasts, the guidance people are now able to present group guidance material to all students at the same time. Each broadcast is prepared by trained guidance workers with the help of numerous consultants and resource personnel. About half the group guidance work is carried out in this manner.

In summing up the program, Kenneth Reber, director of special projects for the South Bend schools, noted: "Although it is difficult to measure, it appears that this method of teaching group guidance information results in a better utilization of staff time. Counselors have more time for individual counseling, untrained personnel are no longer required to teach group guidance units, resource persons strengthen the program. In other words, it appears that more people are engaged in more activities for which they are best qualified."

## SOME BLUNT FACTS

# About air-conditioned



Most schoolmen want direct answers to two pointed questions: "How much does air conditioning cost?" and "Do we really need it?" This article provides factual data to help you arrive at the best conclusion for your district.

■ ■ ■ The greatest obstacle to wider use of air conditioning in schools today is plain naked fear of citizen reaction.

This is glaringly apparent when one interviews schoolmen who understand the facts about its cost and value. Even the most hardboiled man is apt to say, "We're having a hard enough time selling the need for new schools. Why open our-

selves to the charge of saddling the taxpayers with an unnecessary frill?"

And yet, air-conditioned schools, in increasing numbers, are being built. Why? Superintendent R. Guild Gray, of Clark County, Nev., who recently completed a fully air-conditioned, 1,000-pupil junior high school, has one answer. He says, "Our Hyde Park School cost \$11.35 a square foot to build. This is the



By HENRY WRIGHT, technical consultant

*Henry Wright was managing editor of Architectural Forum before devoting his full-time efforts to consultant work. An acknowledged authority on heating, ventilating and lighting, he has been widely published in technical and consumer publications.*

## d schools

cheapest we've been able to build any comparable facility, and we think the most important reason for this was air conditioning. With air conditioning, we didn't have to worry about breeze ventilation and other factors which complicate school layout. We were able to build a good deal more compactly, and that meant a school that not only was cheap to build; we're finding it a lot cheaper to maintain as well."

### In a cold climate, too

Superintendent J. B. Johnson of Alton, Ill., has an answer of another kind. Alton has had the air-conditioned Eunice Smith elementary school in operation for several years and is just completing another, the Gilson Brown school. Alton's experience has been so successful that the school district will, in all probability, never again build a school that is *not* air conditioned. Again, why? Here is Superintendent Johnson's explanation:

"We figure that our air-conditioned schools have cost us *more* to build than non-air-conditioned schools, although not enough more so that it's easy to say for certain—probably less than 5%. And for this money we are getting at least 20% more use out of the air-conditioned space. For the last three years we've held our summer school at Eunice Smith, and during that time the enrollment has grown from less than 200 to 547. Of these, 367 are high school enrichment and make-up students. There are 180 elementary pupils, mostly taking remedial reading. Next summer, with Gilson

Brown school available, we expect it to grow a good deal bigger." As Alton's summer school program is supported by tuition, it costs the taxpayers little or nothing and is adding considerably to "take home" education.

### Comparative costs

The city's new Gilson Brown school also provides representative data on what school air conditioning costs. Bids were taken on heating and ventilating only (but with suitable provisions for *future* air conditioning) and for completion with the air-conditioning system. In

a total building cost of \$13.51 per square foot, heating and ventilation amounted to \$1.67, and the addition of air conditioning came to 50 cents more, as compared with other mechanical costs of \$1.05 for plumbing and 84 cents for electrical work. The architects, Keeney and Stolze, estimate that provisions for future air conditioning included in the \$1.67 base bid amounted to about 20 cents per square foot. Taking this into account, the total cost of adding air conditioning to the regular heating and ventilating system was 70 cents a square foot. In dollars, it amounted to \$22,400 for a 15-room

**A summer program** and curriculum planning sessions for teachers from all over the district prior to September school opening keep classrooms like this one—equipped with air-conditioning units—in use all year at Eunice Smith school.



## ONE SCHOOL, TWO DESIGNS

■ Before going ahead with its all air-conditioned F. Ware Clary Junior High School (*right*), the Syracuse, N. Y., school board took a long look at the comparative costs of an air-conditioned vs. a conventional building.

Early in 1958, it requested the local architectural firm of Pederson, Hueber & Hares to submit plans and cost estimates for two different school designs—one air conditioned, the other not. The architects predicted that the air-conditioned school, providing equal educational facilities, would require lower initial construction cost and lower annual operating expense than the conventional one. Here are the factors which influenced this appraisal:

■ The conventional design "finger" plan—with various building elements in rectangular wings projecting from communicating corridors—would require more perimeter wall than the air-conditioned building, made up of large, square elements. The greater the perimeter wall area, the higher the construction expense and the cost of heating and wall maintenance later on.

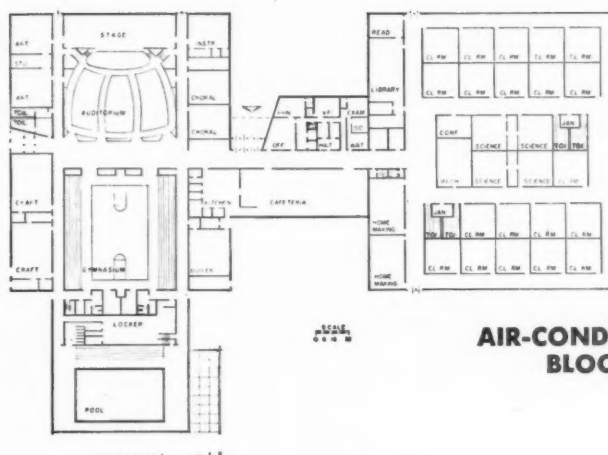
■ Complete air conditioning would do away with the need for large window areas with ventilating openings, the most expensive element of exterior walls.

■ Structural costs in the square, block building could be reduced through the use of continuous spans, rather than the repetitive spans required in the conventional finger plan.

■ Classrooms in the air-conditioned school—all completely interior, with no exterior walls or exterior glass—would be surrounded by a perimeter corridor. This would improve internal traffic, and considerably reduce heating and cooling load and expense.

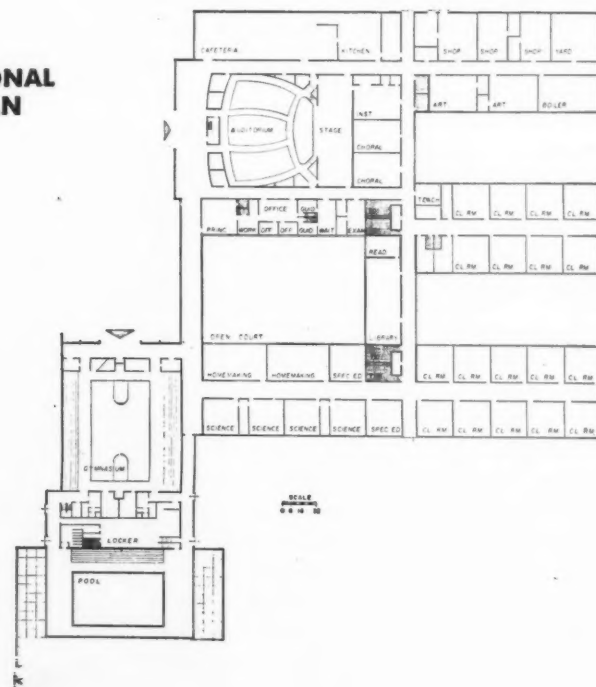
■ Other factors stressed by the architects in their report favoring the air-conditioned school included: reduced tonnage of structural steel; more compact electrical system; more compact domestic water, storm and sanitary systems; reduced capacity of heating plant required; and simplified temperature controls.

Two items of additional expense—the need for refrigeration and dehumidifying equipment and for chilled water distribution—had to be consid-



**AIR-CONDITIONED  
BLOCK PLAN**

**CONVENTIONAL  
FINGER PLAN**



ered in building the air-conditioned school. Even so, net savings of \$68,995 were predicted for the air-conditioned block plan.

Figures submitted when the job was put out to bid verified the accuracy of these original predictions. (See comparative table, below, of bids received on the air-conditioned F. Ware Clary school and a similar school of conventional design and construction done by

the same architects and engineers in the Syracuse area.)

Net added operating cost of air conditioning for the normal school year was estimated at \$500-\$1,000 over the conventional building. Net added cost for year around air conditioning was given at \$2,000-\$2,500. But this slight extra expense was offset by the reduced building maintenance required for the air-conditioned school.

### COMPARATIVE COST TABULATION

These figures are based upon actual bids received on the F. Ware Clary air-conditioned school and on a conventional school of similar capacity in the Syracuse area.

	BLOCK DESIGN— AIR-CONDITIONED	CONVENTIONAL DESIGN
Gross floor area	127,541 sq. ft.	126,916 sq. ft.
Volume	2,279,765 cu. ft.	2,284,024 cu. ft.
Ground line perimeter	2,079 ft.	3,050 ft.
Projected wall perimeter	2,644 ft.	3,726 ft.
GENERAL CONSTRUCTION		
Exterior wall	Foundations, wall framing, coping \$ 83,500 Exterior masonry, flashing base, painting 118,000 Fixed sash and glazing 34,200	Foundations, wall framing, coping \$ 122,000 Exterior masonry, flashing base, painting 146,000 Operating sash and glazing 79,500
Interior partitions	6,750 lineal ft. glazed transoms classroom to classroom and corridor 65,700	6,547 lineal ft. no transoms 58,900
All other general construction	Structural steel, concrete, mill-work, flooring, etc. 1,077,600	Structural steel, concrete, mill-work, flooring, etc. 1,084,100
Total General Construction	\$1,379,000	\$1,490,500
PLUMBING	Compact domestic water, sanitary and storm systems 98,000	Extended domestic water, sanitary and storm systems 106,000
ELECTRIC	Compact power distribution, reduced conduit and wire size 178,000	Extended power distribution, larger conduit and wire size 215,000
CLIMATE CONTROL	Year around central station air conditioning 378,000	Heating and ventilating 276,000
TOTAL CONSTRUCTION COST	\$2,033,000	\$2,087,500
NET SAVING WITH AIR CONDITIONING	\$54,500	

text continued from page 63  
school. This was 4.8% of the total cost of the school.

In a national survey of a number of schools in which bids were taken on a "with or without" basis, winter heating and ventilation, employing classroom unit ventilators, cost on the average (10 schools) \$1.38 per square foot. "Future" air-conditioning provisions (in seven schools), including air-conditioning unit ventilators, insulated piping, condensate drainage, etc., added 19 cents to this figure. Completion of the air conditioning (four schools) added another 53 cents, making the total additional cost of complete air conditioning 72 cents. Costs at Gilson Brown were almost identical to the average shown by this survey.

### Analyze the cost factor

This figure is so small, relative to the over-all cost of school building, that it has led many school officials to question quite seriously whether school air conditioning costs anything at all. Almost any significant change in school design is likely to make a difference—one way or the other—of 75 cents a square foot in construction cost, and air conditioning, particularly in hotter climates, frequently results in significant changes in school plans. Pinellas County, Fla., is currently in the process of testing the validity of this concept by building two junior high schools to identical educational specifications, one without air conditioning and the other with it. The first of these schools has been bid at an over-all cost of \$589,559 and the second school—the one incorporating air conditioning—is about to be bid. *Expectations are that construction cost savings of over \$50,000 will be realized as a result of the more compact design of the second school (in which breeze ventilation need not be relied upon), and that this will cover the added cost of the air-conditioning system.*

Such savings are obviously possible only in the case of new construction where a firm decision to air condition has been arrived at in advance, and can be taken into account in designing the school. Ordinarily they involve the use of fewer openable windows, more usable inside space, less waste space in corri-

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dors, and so on. Adding air conditioning to an existing school, especially one in which the possibility of installing it was not anticipated in the selection of heating equipment, costs a good deal more than adding it to a new school. Where the existing system does not provide mechanical ventilation, adding air conditioning may cost as much as \$1.50 or \$2 a square foot. Thus, chances are that most school air conditioning will be applied to new buildings, at least in the immediate future.

### What the public thinks

This brings up a prime bogey of school officials—the question, “What’s going to happen to all the schools that *aren’t* air conditioned?” This question might frankly be translated as, “What’s going to happen to *me* if I sponsor air conditioning for one new school, when I’ve just left it out of the last five or six that have been built? Won’t this just about guarantee that two-thirds of the town will be up in arms against me, for not seeing to it that they, or their children, got it?”

On this, Alton’s experience is again significant. Superintendent Johnson has not been drummed out of town. And, because Alton is one of the few “ordinary climate” districts which has added an air-conditioned school building in a new suburban area—a circumstance which might be considered asking for trouble—the fact that the new school has reflected nothing but credit on all concerned provides an excellent object lesson.

Actually not only has no resentment developed in Alton, the city is already building another air-conditioned school, also in a new residential district. Inclusion of air conditioning in the second school resulted in little comment and no opposition worth mentioning. The big reason for this seems to be that the first air-conditioned school has been used on a community-wide basis. During the normal school year, Eunice Smith is used as a regular elementary school. Following this, it is reopened for a seven-week summer session, drawing pupils from all over the city. And after summer school is over, it is used by teachers from the whole school district for their curriculum planning work. Altonians are much more aware of these extra values than they are of

the fact that refrigeration cooling is also available in the new building, when needed, during the regular school year.

Alton’s experience shows that the question of whether schools “really need air conditioning” is very much like asking whether the American farmer “really needed” the Model T Ford. As of 1910, it was probably correct to say that farmers didn’t need the Ford at all, in the sense that no such need was felt. By 1920, of course, a Model T was an obvious necessity to any form of farming.

As in the case of the pre-Ford farmer’s isolation, the educational system has been at the mercy of the weather for so long that the effects of this are taken for granted. The motion picture industry, which has not been so complacent about shutting down for a quarter of each year, learned long ago that it is next to impossible to crowd people together, indoors, when the outdoor temperature rises much above 75 degrees—a discovery which led first to the outdoor “Airdrome” and later to the first usable air conditioning. This is true because people are heat engines, and even with their “motors idling” give off as much heat as a good-sized light bulb. They also exude moisture that is capable of rendering a merely warm atmosphere practically unbearable (the occupants of an average classroom evaporate more than a quart of water an hour, collectively, and release a considerable amount of heat). When outdoor air is cool enough, it can be used—exactly as the air from an air conditioner is used—to overcome this heat and moisture “gain.” But as the outdoor air becomes warmer, larger and larger quantities are required to keep a schoolroom habitable, until nothing short of a gale will suffice. The learning process, as every teacher knows, slows down and eventually practically stops. At the point where it does, we have traditionally very sensibly closed up shop and gone fishing.

The chances now seem excellent that as fast as comfortable teaching space becomes available during hot weather, it will be used to capacity. What is less evident, but equally true, is that as school buildings begin to be used a larger part of the year, fewer new buildings will be needed to meet expanding educa-

tional needs, saving school construction dollars. Assume that Alton, over the next three years, graduates 45 eager beavers who make maximum use of summer school to complete high school a year early. On the average, Alton will need 15 less high school desks as a result. The same argument applies if you emphasize broader educational needs as the major expansion problem.

### Out of the experimental stage

One reason such things are likely to begin happening in all parts of the country is that the step to school air conditioning is a relatively easy one. And the reason that *this* is so is that so much of the step has already been taken. Air conditioning and present school systems of mechanical ventilation are distinctly compatible. The only difference between the wintertime cooling of a classroom with outdoor air, and summertime cooling of the same room by air conditioning lies in the source from which we get the cool air. In winter we get it “for free” from the outside. In the summer we have to cool it. This means that where an adequate system of wintertime *ventilation cooling* has been provided, you have *most* of the elements of a summertime *air conditioning* system. There are differences in detail, but basically, all you lack is the necessary refrigeration machinery. A properly designed system of “central fan” ventilation, for example, requires only the addition of a cooling coil and suitable control devices to be able to supply cool air in summer as well as in winter. Classroom unit ventilators are available which supply heating and ventilation cooling in winter, employing hot water as the source of heat. In the summer these same units provide conditioned air for cooling, employing chilled water for this purpose.

The converse is just as true: To be suitable for school use, an air-conditioning system should be capable of providing adequate *ventilation cooling* in winter along with *refrigeration cooling* in summer. If the air-conditioning equipment does not make this provision, you are likely to find yourself running a refrigeration system for cooling when the outdoor temperature is around 40 degrees or colder, and this is mani-

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# How to sway public opinion

## A SCIENTIFIC APPROACH

Don't "sell" the public on just those points which you feel to be important. Instead, zero in on the specific yardsticks your voters use to measure quality. This article tells you how.

■ "A school is no better than its physical plant."

■ "Show me your delinquents and I can judge your school system."

■ "Good teachers mean good schools."

Does one of these statements guide your district's taxpayers when they evaluate your schools? Or do they base their judgment on any of dozens of other factors? Whatever their yardsticks, the critical question that you, as a school manager, must ask yourself is: "*Do I really know what the public uses as the criteria for its judgment?*"

There is a very real danger here

of assuming that you know what your citizens think, for your more sophisticated views of educational problems are often worlds apart from those held by other residents of your own district. Dramatic evidence of this split in opinion between school and community was uncovered by Dr. Ralph R. Redo in a recent study of citizen attitudes. To a jury of 19 public school educational authorities—who could safely be presumed expert on school matters—Redo submitted a series of statements related to school finance. After tabulating their responses, he distributed essentially the same questionnaire among residents of 10

different school districts in the Pittsburgh area.

By comparing the replies he received from the two groups, Redo was able to determine the areas of conflict—and agreement—between them. He found that experts and laymen clashed headlong on a number of concepts. Here, for example, are some statements considered "true" by the experts:

1. Very small school districts are a waste of money.

2. Poor school districts usually accept changes in the school program more quickly than wealthy ones.

3. It is undemocratic to give fi-





nancial support to parochial and private schools.

4. Wealthy school districts should be permitted to pay their teachers more money than poorer districts.

#### **But citizens disagree**

Most schoolmen would probably agree with the experts on these four points. But Redo's survey reveals stiff opposition to each statement among the laymen he surveyed. The lesson for school authorities is clear: Tread softly over such thorny points when promoting educational improvements. If your voters are convinced that a small district is more desirable, you've got a long-term educational job ahead. Don't evade it—but "sweeten" your approach by advancing the virtues that your public identifies with "a good school."

Of course, public opinion is not always out of sympathy with the views of school people. Redo uncovered substantial areas of agreement, too, in his study of citizen attitudes. Among them:

1. Schools that spend more for education usually get better services and better teachers.

2. School districts should have emergency funds.

3. Citizens should have the opportunity to participate in school finance decisions that affect them.

4. Public schools are concerned not so much with equal education as with equality of opportunity for education.

District authorities, aware of these areas of agreement between school and taxpayer, have a valuable public relations tool right at hand. One sure way to guarantee broad support for a school program is to keep the public aware of the acceptable principles by which its schools are managed. *People, in general, like to think they are getting their money's worth. You can best persuade them by demonstrating that their tax dollar is being wisely spent on matters which they think are important.*

#### **New evidence on the subject**

This "scientific" (or sophisticated) idea is reinforced by the continuing study of public attitudes now underway at the Institute of Admin-

istrative Research at Columbia University. According to William S. Vincent, a professor of education at Teacher's College who is directing the study, there are at least 40 major attitudes about education that must be taken into account at the local level. Within these, Vincent has uncovered almost 300 separate sub-categories so far, and the chances of his finding many more are highly likely.

#### **IT'S NOT WHAT YOU DO, BUT HOW YOU DO IT**

Sociologist David Reisman in "The Lonely Crowd," his widely-discussed book of a decade ago, declared that we, as a nation, are becoming more concerned with means than with ends. To illustrate, he cited the case of the newly-built rental suburb of Park Forest, near Chicago, operated by a private concern, American Community Builders. ACB, interested in public reaction to its governing policies, questioned residents about their gripes. Many respondents had complaints about how the project was managed. But, surprisingly, most of them objected to the fact that they had objections! They felt that if they had been properly manipulated, with the necessary amount of public relations skill, they could have been made to like the conditions imposed upon them by the governing policies of ACB.

The study is not based upon public opinion polls in which responses are limited to listed attitudes which have been pre-selected. Instead, the "critical incident" device has been employed to encourage open-end, essay-type answers. Conducted by Dr. Archie MacGregor, research associate in the Institute of which Vincent is executive officer, the probe has contacted 3,700 members of 41 communities of the Metropolitan School Study Council so far. Questions were addressed to the

members of three groups within each community: the school board, a school-connected group (PTA, for example) and a non-school connected group (civic or service club).

Here are some of the study's findings to date:

**Quality teachers.** In almost all the groups sampled, the majority of responses expressed concern for teachers. Most of those questioned seemed to feel strongly that good schools require adequate numbers of well-trained, experienced instructors. This "good teacher-good school" theme might be the most appropriate one for administrators to consider in their public relations programs.

**Public information.** Almost all the groups sampled were convinced that schools, in general, are not doing an adequate job of keeping the public informed about what they are doing. Many respondents were unable to cite a particular school or a good example to illustrate their concept of what "good" education consists of. This indicates a need in most school districts for a strong, continuing information program to keep the public posted about school plans and achievements. (*This same need is not limited to school affairs. See box, this page.*)

**Physical plant.** Modern buildings, new equipment, unique, purposeful school design, and adequate space and grounds, were also frequently cited by respondents as indicators of school quality. This isn't surprising since voting on new construction proposals is the one active means of local participation in education that is open to every taxpayer today. Since school building is a subject that most school authorities have kept the public informed about, this feedback demonstrates how well the lesson has been learned.

Some attitudes, though less prominent in the responses, were still present in the answers of all the groups consulted. Chief among these:

The effectiveness of school-community relations was considered a barometer of school quality. Minor, though extensive, mention was made, too, of the organization of curriculum; the effect of the school

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# Teachers in Summit, N.J.

say

## MERIT PAY WORKS

For years, the faculty in Summit, N. J., fought a merit schedule. Today, after two years of operation, a merit pay plan keyed to a careful position analysis, and prepared in part by the teachers themselves, has won unqualified endorsement. Here's how it works.

By MORTON ASHMAN

*President, Summit, N. J., Teachers Association*

■ ■ ■ Merit pay can, does, and should work, say the teachers of Summit, N. J. A merit plan has been in effect here for two years and meets with the approval of 69% of our teachers, the very group that, in most school districts, is most hostile to the idea.

The reasons are not difficult to explain. First, our merit pay plan was worked out in cooperation with teachers and administrators, aided by professional management consultants. Second, it is based on a position analysis that makes "unfair" evaluations difficult, if not impossible. Third, constant reviews and checks keep the whole system in line.

### **Merit plan proposed**

Summit has always had some kind of super-maximum which could be awarded after a teacher reached the top of the salary schedule. In 1947, when Superintendent Robert Reed

was appointed, an attempt was made to put a logical and defensible merit plan into effect. Most of the teachers were opposed to the entire idea but the board's main arguments—that all teachers with the same experience were not worth the same to the school system and that when salaries became high some distinction would have to be made between average teachers and outstanding ones—were impressive.

The first attempt to arrive at a workable plan was made when the administrators of Summit worked out a rating sheet to help them award available merit money objectively. But from the teachers' point of view, when contracts came out that spring, there still seemed no clear cut way to justify who got merit pay and why.

When members of the local teachers' association made known their dissatisfaction, the board asked us

to improve the rating system ourselves. Although a three-man committee of teachers did revise the rating sheets, it still satisfied no one, and in a poll taken that year, 92% of the teachers voted against the merit principle as it was being applied in Summit.

The basic cause of dissatisfaction (even those who were receiving merit pay were obviously voting against it) was the absence of a complete definition of the job required and the lack of reasonably objective standards that could be used to appraise an individual teacher's performance in his job.

### **Professional help asked**

Although the board continued to favor merit rating, and the teachers remained unalterably opposed, nothing was done to reconcile their positions until, in the spring of 1956, the teachers recommended that the

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# Summit asked: what is the teacher's job?

**The basic function of this position is:** to impart to students approved skills, knowledge, appreciations, principles and fundamental attitudes; and to develop each student to his capacity in ways which promote the general welfare.

**Major responsibilities:** 1) classroom management; 2) character development; 3) curriculum development; 4) daily preparation; 5) knowledge of subject matter; 6) public relations; 7) pupil-teacher relationships; 8) schoolwide and system effectiveness; 9) techniques of instruction; 10) pupil evaluation.

## **RESPONSIBILITY: classroom management**

*The standard of performance of this responsibility is met when the room is so managed as to facilitate the learning process and promote maximum pupil development.*

### **KEY DUTIES**

1. Seats the pupils in such a manner as to provide for individual differences thereby establishing the best possible learning environment.
2. Assigns responsibilities to pupils for care and arrangement of such physical facilities as windows, visual equipment, etc.
3. Maintains the room in such a condition as to insure health and safety.
4. Performs clerical responsibilities and other required routines such as collecting cafeteria money, milk money, towel fees, etc., promptly and efficiently without interruption to the learning process.
5. Develops, prepares and/or provides attractive informative displays to stimulate the learning process.
6. Provides and maintains material such as classroom library, maps, gym equipment, supplies, etc., to broaden the learning process.
7. Performs scheduled classroom duties promptly at the assigned time and place.

## **RESPONSIBILITY: character development**

*The standard of performance for this responsibility is met when the social and moral behavior of the pupils is at a level characteristic of the age group involved with due regard for the effect of outside factors which might affect their behavior.*

### **KEY DUTIES**

1. Sets an example of socially acceptable behavior which will serve as a pattern for the pupil to emulate.
2. Endeavors through discussion, commendation, reward, reprimand, punishment and such other resources as may be at the teacher's command to develop socially acceptable pupil behavior and growth.
3. Monitors group situations involving moral stresses which test pupil integrity, and takes corrective action in these situations.
4. Inculcates respect for rights, opinions, property and contributions of others.

## **RESPONSIBILITY: curriculum development**

*The standard of performance for this responsibility is met when the teacher constructively participates and contributes in the development and planning of the school program.*

### **KEY DUTIES**

1. Serves on appointed or established committees to analyze the existing curriculum.
2. Takes an active part in necessary research for the curriculum committee.
3. Originates and presents ideas for improvement in curriculum.
4. Engages constructively in the evaluation of the curriculum.
5. Adapts and tests the curriculum as it applies to the needs of individual instructional groups.

## **RESPONSIBILITY: daily preparation**

*The standard of performance for this responsibility is met when the preparation is adequate to achieve the objective of the day's lesson.*

### **KEY DUTIES**

1. Prepares and writes daily lesson plans which will contribute to effective teaching.
2. Develops, plans and provides learning situations for simultaneous group activities.
3. Devises, and develops, a variety of activities and resources to assure stimulation in the teaching process.
4. Enlists pupil participation in the planning process as required by the situation.
5. Fits daily plan into established teaching unit within the course of study.
6. Procures and organizes in advance materials, equipment and supplies in readiness for use in class.
7. Plans activities to meet individual needs and differences for slow, average and gifted learner.
8. Makes appropriate arrangements in order to use effectively resource people, community organizations, field trips and excursions to stimulate the learning process.
9. Makes daily lesson plans, seating plans, and teaching materials available for substitutes.

## **RESPONSIBILITY: knowledge of subject matter**

*The standard of performance for this responsibility is met when the teacher gives evidence of necessary understanding and knowledge of subject matter to be taught, and manifests an active interest in broadening and deepening his fund of knowledge.*

### **KEY DUTIES**

1. Keeps abreast in his field by reading current publications.
2. Attends professional lectures, workshops, and conventions to broaden his base of knowledge.
3. Engages in professional study.

4. Keeps informed of world, national and local affairs through reading, travel and/or work experiences.
5. Demonstrates on the job an effective command of the pertinent knowledge and the required skills of the subject being taught.
6. Brings to class a variety of experiences, ideas and incidental information.

#### **RESPONSIBILITY: public relations**

*The standard of performance for this responsibility is met when mutual respect and understanding relating to school aims and achievements result from teacher contacts with parents, citizens or other community groups.*

#### **KEY DUTIES**

1. Maintains good communication with parents by contacting and reporting pupil behavior and/or needs as often as circumstances warrant.
2. Cooperates and participates in PTA activities and those of similar organizations.
3. Observes professional ethics.
4. Participates in civic and community affairs in such a way as to promote appreciation and understanding of the school system and teaching profession.
5. Attends extracurricular affairs of the student body.
6. Maintains teacher-pupil relationships in such a manner as to foster good public relations.
7. Handles contacts with parents in a manner which reflects favorably on the school system and teaching profession.

#### **RESPONSIBILITY: pupil-teacher relationships**

*The standard of performance for this responsibility is met when the teacher provides for pupil growth in a friendly atmosphere of mutual respect.*

#### **KEY DUTIES**

1. Displays evidence of understanding the pupil's social, emotional, physical and intellectual growth and development.
2. Manifests a vital interest in the activities, problems and growth of each pupil.
3. Shows respect for each pupil.
4. Develops in each pupil a sense of personal growth and worth.
5. Maintains discipline by being consistently friendly, fair and firm.
6. Handles behavior problems without emotional upsets or emotional extremes.

#### **RESPONSIBILITY: schoolwide and system effectiveness**

*The standard of performance for this responsibility is met when the teacher actively and effectively participates in the assigned and unassigned duties or activities which aid in the day to day operation of the system.*

#### **KEY DUTIES**

1. Cooperates and maintains constructive professional associations with co-workers.
2. Performs all required school regulations on time.
3. Fulfills established administrative policies and directives.
4. Contributes constructively to committees, faculty meetings and other school system groups either voluntarily or by assignment.
5. Considers intelligently and/or appreciatively suggestions offered by superiors and co-workers.

6. Accepts responsibility for the supervision of pupils, as need arises, both in the school building and on the grounds.
7. Cooperates in maintaining and improving the appearance of buildings and grounds.

8. Participates in school activities, assemblies, recreational programs, displays, and similar features.

9. Takes positive steps in developing and maintaining faculty and student morale.

10. Provides dependable and effective leadership in activities involving the general welfare of the schools.

#### **RESPONSIBILITY: techniques of instruction (motivation)**

*The standard of performance for this responsibility is met when the teacher recognizes and provides for the pupil's interests, needs and abilities and applies instructional techniques which result in the level of learning commensurate with their potential.*

#### **KEY DUTIES**

1. Stimulates interest in prescribed areas of learning.
2. Challenges, encourages and guides critical thinking through use of stimulating questions and provocative ideas.
3. Uses a variety of methods in presenting subject matter.
4. Uses learning aids such as audio-visual material in a profitable manner.
5. Adapts teaching material and methods to the individual needs of the pupils.
6. Teaches groups and individual pupils in accordance with interests, needs and abilities.
7. Directs pupil who finishes assignments quickly into worthwhile activity.
8. Encourages a high quality of performance consistent with the individual's ability.
9. Makes clear assignments and directions with ample time allotment.
10. Develops desirable work and study habits by providing opportunities for the exercise of techniques of reading, organizing materials, etc.
11. Conducts discussions so that pupils learn to express ideas clearly, accurately and completely.
12. Provides for testing and summarization.
13. Leads pupil to engage in solving problems significant to him.
14. Schedules time to meet curriculum requirements through long range planning consistent with philosophy of course.

#### **RESPONSIBILITY: pupil evaluation**

*The standard of performance for this responsibility is met when the teacher measures the development of the pupils under his tutelage as often as required and reports in a timely manner to the parents on the pupil's achievement.*

#### **KEY DUTIES**

1. Administers and scores special and standardized tests of pupil progress.
2. Interprets the meaning of scores obtained from tests.
3. Records test results.
4. Prepares meaningful reports for parents, special teachers and administrators.
5. Relates new test results to pupil potential as evidenced by past performance.
6. Analyzes and reviews with pupil test results in light of pupil's goals and program.
7. Uses specialists for pupil evaluation as required.



# How well is the job being done?

**DIRECTIONS:** This evaluation should be done only in conjunction with the position analyses on the preceding pages. The standard of performance for each responsibility should be read by the rater and be related to the observed per-

formance of the teacher being rated. Enter the number which best describes the teacher's performance in terms of the standard. Intermediate ratings (such as 25, 14, etc.) may be used, but should be restricted to whole numbers.

If the weighted maximum score for the responsibility is:	—	10	20	30
For "Meets the requirements in an outstanding manner"	(5)	10	20	30
For "Fully meets the requirements"	(4)	8	16	24
For "Meets the requirements in an average manner"	(3)	6	12	18
For "Does not meet the requirements at this time"	(2)	4	8	12
For "Fails miserably to meet the requirements"	(1)	2	4	6

Add the 10 scores to get the total score.

MAJOR RESPONSIBILITIES	Relative Weight	Minimum Possible	Maximum Possible	Score
1. Classroom management	2	4	20	
2. Character development	2	4	20	
3. Curriculum development	1	2	10	
4. Daily preparation	2	4	20	
5. Knowledge of subject matter	3	6	30	
6. Public relations	1	2	10	
7. Pupil-teacher relationships	3	6	30	
8. Schoolwide and system effectiveness	2	4	20	
9. Techniques of instruction	3	6	30	
10. Pupil evaluation	1	2	10	
Total maximum and minimum score		40	200	

board of education engage a management consulting firm to work with its committee to prepare what might be considered a proper merit plan. The firm of Barrington Associates, Inc., of New York City, was hired.

During the next two school years, a 40-member teacher committee, divided into working subcommittees, hammered out a position analysis of the teacher's job. This document was to provide the standards of performance against which a teacher's performance could be judged (see box, pages 70 and 71).

In addition, the position analysis set up the basic functions of the

teacher's job and listed the major responsibilities and key duties that he must perform. The position analysis was presented to the teachers step by step as it was worked out. The final copy of the position analysis—after each step had been approved in advance by the teachers and by the teacher committee—was presented, by the consultant, to all the teachers at a general meeting and was accepted by them as a reasonable document answering the question: What is the job of a public school teacher?

Once the task of analyzing a teacher's job had been solved, the basic stumbling block to a merit pay

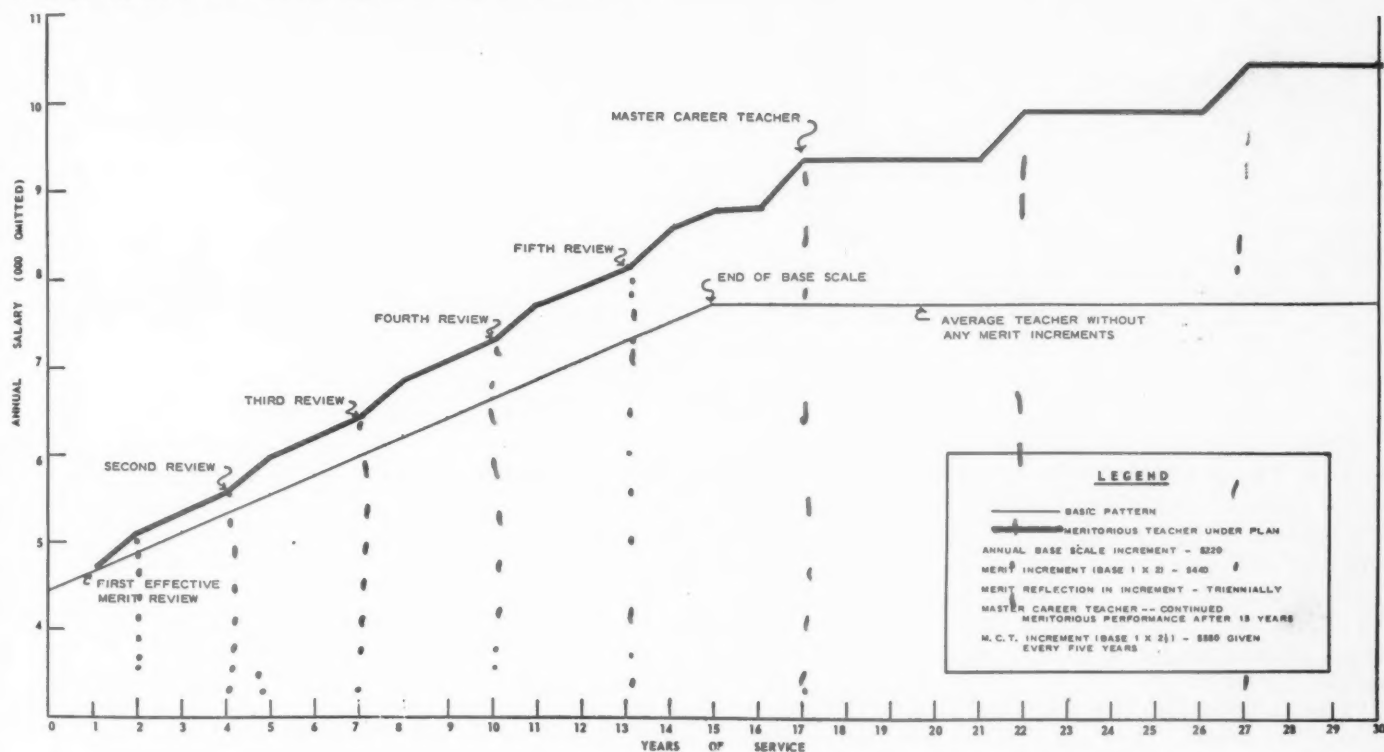
plan had been eliminated. However, our teacher committee then proceeded to work out a system of weighting the major responsibilities of the teacher's job, an incident sheet to help the people who would do the rating be more objective, and a comprehensive plan for paying merit money on an equitable basis. This had to be on a regular pattern keyed to the basic pattern for the satisfactory teacher.

## The plan in action

Our merit pay plan has been in operation for two years now. It is based, of course, on the detailed

*text continued on page 142*

## HOW MERIT PAY AFFECTS SUMMIT TEACHERS



### A CONSISTENTLY MERITORIOUS TEACHER

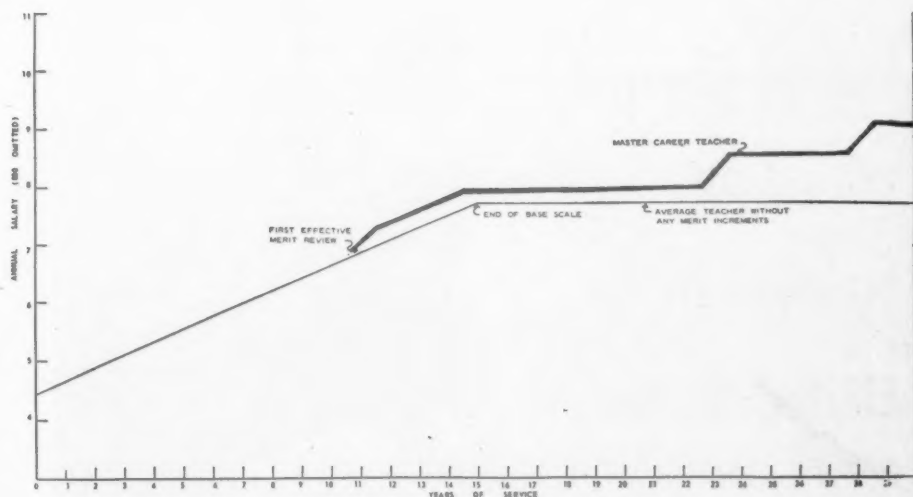
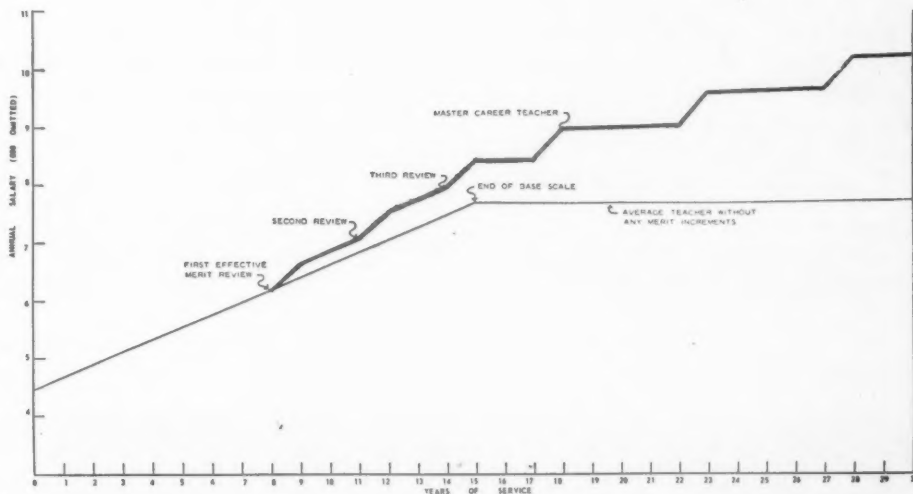
The graph above shows how Summit's merit plan would affect a teacher judged to be consistently meritorious. After her first year, she receives a salary increment equal to double that of an average teacher. Three years later, and every three years until the teacher has been in the district for 15 years, she gets a "merit" increment. After 15 years of service she is eligible for larger merit increments but reviews are held only once in five years.

### THE CASE OF THE LATE STARTING TEACHER

The graph at right shows the salary pattern of a teacher who performed at the average for eight years, then was adjudged a meritorious teacher. Such a pattern might be that of a housewife-teacher, able to undertake additional work after her children had grown.

### HOW MERIT AFFECTS A VARIABLE PERFORMER

The bottom graph shows the way merit pay would be applied to an erratic teacher. After many years of base pay he receives a single merit increase. This increment over the regular base pay is maintained before he receives a second merit increase after 23 years of service. Conceivably, a teacher whose performance was "bad" could be dropped back to the base pay line after receiving a merit increment.





## PHYSICAL EDUCATION -where we

■ ■ ■ The youth of America are in sad physical condition. Twenty-five percent of the youngsters between six and 16 can't *sit up* once! We have become super-mechanized. We keep our kids in playpens, school buses, behind desks and in front of television sets.

"Twenty years ago kids got some exercise in school. Then we began this new thing called 'play.' Play could do everything. Games were the thing. But games don't provide a good physical education program for students. The tests prove it."

These are the opinions of physical education specialist Bonnie Prudden\* who spoke out in *SCHOOL*

*MANAGEMENT* magazine ("How good—or bad—is your physical education program," *SM*, Aug. '58). The tests to which Mrs. Prudden refers are the Kraus-Weber Tests of Minimum Muscular Fitness (see page 76). These tests were used to measure the physical fitness of children in the United States and Europe. The results showed that more than half of the children in the United States failed to measure up to minimum standards of physical fitness. In Europe, despite a much lower standard of living, only 8.7% of the children failed.

Mrs. Prudden's solution to the problem was a simple one—return to a program of calisthenics, tumbling, gymnastics and basic exercises in our schools. Games—intra-

mural and interscholastic—she said, belong only in our after-school programs. (For a complete summary of Mrs. Prudden's program, see below.)

More recent reports seem to bear out Mrs. Prudden's contentions concerning the inadequacy of most school physical education programs. An Office of Education report on urban elementary schools, for example, points out that more than a quarter of the students in grades one through three receive their only physical education instruction from classroom teachers with no help from specialized personnel. Only 12% of the youngsters in these grades get direct teaching from physical education specialists.

In grades four through six, the picture is not much brighter. Spe-

\* Mrs. Prudden is director of the Institute of Physical Fitness in White Plains, N. Y.

**Bonnie Prudden  
indicts physical  
education  
training in the  
United States**



Here, drawn from the article in *School Management's* August, 1958, issue, is a summary of remarks made by Physical Education Director Bonnie Prudden.

1. We have become super-mechanized. Fifty years ago just the necessity of walking to get anywhere helped to develop good muscles.
2. Parents have contributed to this problem by keeping children in carriages, strollers, playpens and cars more often than necessary. Nobody is allowed to really exercise any more.
3. The problems of children can be cleared up during their first six years



Recent reports show that physical education programs in most of our schools are below par. Here are the results of two massive surveys, and a report on a successful program in Sherburne, N. Y.

## stand and what can be done

cialists teach 29% of the students, but 16% get their instruction from untrained and unguided classroom teachers. The great bulk, in both cases, receive their instruction from classroom teachers who may obtain some help from specialists.

### No in-service training

In almost half of the schools where classroom teachers are on their own, there is *no opportunity for in-service training in this area*. In schools where specialists are available, the overwhelming majority are assigned to many schools or to a central district staff. Many have responsibilities other than those related to physical education.

Almost half the schools surveyed did not have adequate gymnasiums

or playgrounds, and all-weather facilities were found in only 48% of the schools. Outdoor climbing poles or ropes were reported by just 2% of the schools; climbing apparatus, such as jungle gyms, by 33%; horizontal bars and ladders by 20%.

Only 23% of the students in grades one through three get as much as half an hour of physical education daily, the recommended *minimum*. In grades four through six, 28% reach this minimum.

### Connecticut school study

Although physical education opportunities—and problems—are notoriously worse in urban schools than in rural ones, a recent study conducted by the Connecticut Association for Health, Physical Educa-

tion and Recreation shows that the problems are widespread. The Connecticut survey included elementary and high schools in big and little cities, suburbs and rural areas.

The results showed that although 90% of the 169 towns surveyed teach physical education in their elementary schools, only 41% meet the standard of a daily period, and these average a maximum of 30 to 40 minutes. Fifty-nine percent have less than a daily period, with many towns reporting as few as one period per week. Moreover, 50% of the schools included "recess period" as part of the physical education program. This means that actual instruction time is even more limited than it would appear on the surface.

Although the recommended ele-

in school—but most schools are not doing the job. Instead of really training students to use their muscles, they're training them to enjoy life, to play games, to be a whole person. This is not the job of the physical education department of any school. The very children who need exercise most are the ones left out under such a program.

4. Much of the blame for the lack of good physical education programs in the schools comes right back to the parents. They are being over-protective. A student is injured on a piece of apparatus and the parents demand that the apparatus be removed from

the schools forever. "Parents are afraid that their child will get sweaty and then catch a cold. They write notes by the dozen keeping the kids out of gym."

5. The best kind of program for any school is one that includes calisthenics, exercise on the floor, running, use of apparatus, tumbling and the like. Games have no place in a good physical education program until after-school—and then only after the body has been built.

6. Physical education need not encroach on academic time. As a matter of fact, a few minutes of calisthenics

before each class session will not only improve health, it will improve attentiveness, too. Give up three minutes of each class period to physical education and you will actually have more time during which students are receptive to teaching. Further, discipline problems will be almost eliminated.

7. A program like this can be carried out in almost any space with almost no equipment. It can be carried out by people with almost no training. It is easy, it is not time-consuming and it works. It is the best solution to one of America's greatest problems—the poor physical condition of its youth.

mentary school standard is one specialist in physical education for every 350 elementary pupils, 50% of the Connecticut schools have no specialist at all. To further compound the difficulties, 60% of the towns do not have a written course of study for the guidance of classroom teachers.

Outdoor facilities are not much better. Approximately 4% of the schools have no outdoor play area and another 24% have no surfaced area for multiple activities. Appropriate and safe outdoor apparatus for all age groups is lacked by 39% of the schools.

## Secondary schools

The secondary school picture is hardly brighter. As far as personnel is concerned, the survey found that 768 teachers have to meet the needs of 153,834 students in the secondary schools. That's an average of more than 200 students to each teacher, including coaches, special therapists, etc. No coordinator, special supervisor or chairman is available in 47% of the schools reporting.

Approximately 36% of the schools reported having no written course of study in physical education, and in 60% of the schools, only the equipment needed for varsity sports was considered "adequate."

In 9% of the secondary schools, there are no indoor facilities beyond classrooms. Combination rooms are used by 28%. More than half the schools rated their indoor facilities "fair" or "inadequate."

Outdoor facilities rated no higher, with the majority considering them less than adequate. Multi-purpose surfaced areas are available in only 43% of the schools and tennis courts exist at only 24%.

## In summary

In summarizing its findings, the Connecticut Association stated: "The physical education program in Connecticut schools is far poorer than it should be when considering what Connecticut could and should do for the boys and girls. As measured against the schools' own estimates of progress towards objectives, the consensus seems to rate the programs as only fair. This is a

shocking fact when the physical education program in the schools is the one area of education in which all the boys and girls should be taught the skills, knowledges and attitudes for keeping physically fit . . .

"The above rating, by the teachers and administrators, is directly influenced by the lack of adequate time for instruction, indiscriminate age and ability grouping in classes; lack of sufficient number of trained personnel; limited equipment; and limited teaching facilities, notably in the elementary schools where 25% of the schools have no indoor teaching facilities for physical education . . .

"There is a noticeable effort to emphasize and include more strenuous activities, more body-building activities such as calisthenics, weight-lifting (for boys) and resistive exercises. There is a real need for teaching more skills which have carry-over value for leisure time recreational activity."

Both of these surveys indicate that Mrs. Prudden's views on the state of physical education in America's schools, though extremely expressed, are probably basically correct—at best it's only fair.

## What can be done

But Mrs. Prudden stepped on some very sensitive toes when she pointed the finger at "games" as the culprit. Her suggestion that a program of calisthenics and gymnastics be substituted has met with widespread opposition among the very people who would have to institute it.

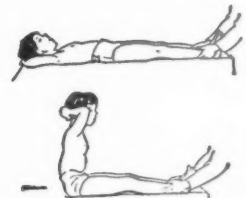
In Sherburne, N.Y., Athletic Director Andrew Grieve, who runs a game-centered program, decided to give his students the same tests that Mrs. Prudden had used to show the low level of physical culture in this country. His object: To prove that a good game-centered program could produce the same results as a good gymnastics program.

After more than a year of careful observation and testing, Mr. Grieve reports on his findings and his program in the article, "Physical Fitness through Games," which begins on page 77.

Drawings by Marjorie Morris From "IS YOUR CHILD REALLY FIT?" (Harpers & Bros., 1956)

## THE SIX KRAUS-WEBER TESTS

### Abdominals and psoas



### Abdominals alone



### Lower abdominals



### Upper back muscles



### Lower back muscles



### Flexibility



ical fitness programs in the United States are below par.

TESTS

#### FOR MUSCULAR FITNESS

The person taking this test lies flat on his back, hands behind his neck. The instructor holds his feet down and commands him to "roll up into a sitting position." If the person cannot sit up, he fails.

In this test the subject again lies on his back but this time with his legs bent at the knees. The instructor gives the same commands as in Test One. This test is slightly more difficult than the first.

Once again the subject starts on his back, hands behind his neck. From this position he must raise his legs 10 inches off the table keeping his knees straight. He must hold them there for 10 seconds.

The subject lies on his stomach, with a pillow placed under his hips. The instructor holds his feet down and commands him to raise his chest, head and shoulders from the table and hold them up for 10 seconds.

For the fifth test, the instructor holds the subject's chest down and commands him to raise his legs while keeping his knees straight. The person being tested must hold this position for 10 seconds to pass.

The subject stands at attention, then bends from the waist, knees straight, to touch the floor. He must hold that position without "bouncing" for three seconds. This is the test most often failed.

## Physical fitness through games

By ANDREW GRIEVE

*Director of Physical Education, Sherburne, N. Y.*

■ The physical fitness of our youth is not what it should be, but we should not judge them all by the results of a narrow test given to those students who are in areas where physical exertion is severely limited, sometimes to the turning of a television knob.

Here in Sherburne, we have been running a game-centered physical education program for a number of years, and on standardized tests regularly given to our students, we have had what we considered good results. However, it was true that none of these tests were the Kraus-Weber tests.

In order to check the real value of our program against this measure, we tested 556 boys and girls in our physical education courses. The results were as follows:

Three percent of our students failed the first test, sitting up with legs held flat. Sitting up with legs bent at the knees was failed by 13%. Leg lifts while lying on the back was failed by 5%. Chest raising while lying on the stomach was passed by virtually every student. Eight percent could not lift their legs when they were lying on their stomachs.

The only area in which a substantial number of students failed was in the flexibility test—touching the toes.

How do these results compare with those that so startled the nation a few years ago? Nationally, 57.9% of the students failed one or more tests. In our schools, 50% failed at least once. The flexibility test was failed by 44.3% nationally. Our failure rate was 40%. While 35% of the children tested nationally failed one or more of the strength tests, 22% of our students failed.

On the surface it would appear that our students did little better than the very poor national norm. But a little analysis of the figures is in order.

Consider the results on the five tests of strength. The figures show

our failure rate to be 3%, 13%, 5%, 0.5% and 8%. The over-all failure rate of 22% would indicate that we had a great many single-test failures.

Another interesting fact which we noted as we compared our statistics was the obvious *decrease* in the failing percentage on the five strength tests as we progressed through the grades. The first grade, for example, had a 38% failure rate. By second grade the rate had dropped to 28%. In the fifth and sixth grades the failure rate was down to 9%. As simple as it sounds, the only conclusion to which we could come was that the strength being measured develops with maturity. Common sense indicates that a first grade student is not so strong as one in the sixth grade.

How about flexibility? Why is it so far out of line? First, very few normal childhood activities develop this "ability." Rather, vigorous activity will tend to reduce this flexibility. Since most normal activities will not develop the flexibility, we determined that the simplest way of improving our rating on the flexibility test was to repeatedly perform the movement classified as a test. We did this with several students and the result supported our theory.

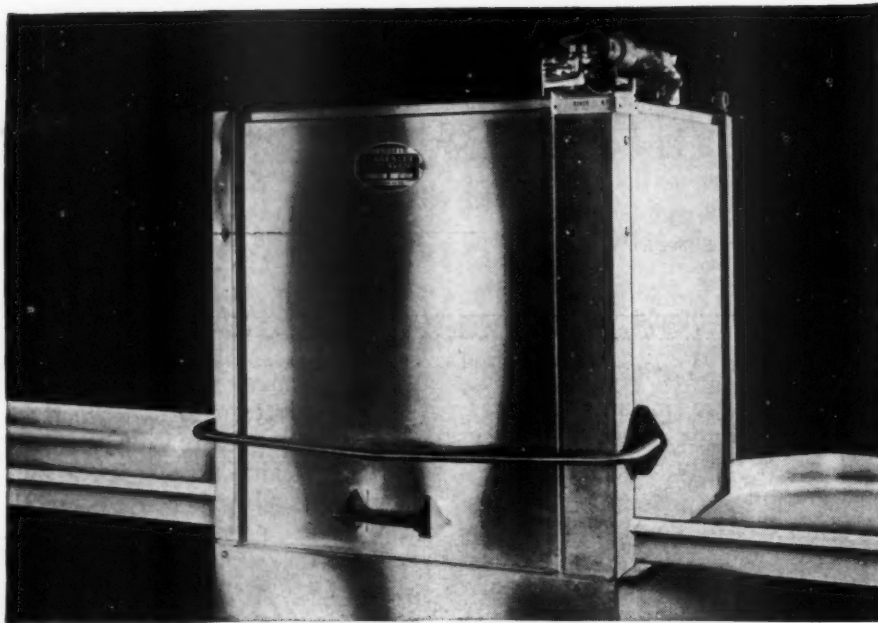
What does this all mean? Certainly not that the physical education programs in most of our schools are adequate. But it does mean that a properly conducted program based on playing games, rather than drill and calisthenics, can serve to build up and develop the physical strength of our children.

#### A game program

Our program starts with boys and girls in the first three grades. Emphasis from the start is on learning basic game skills. We play and teach such games as basketball, throwing and catching softballs, and running. We also make use of dancing and tumbling and combative games and we use calisthenics to provide a short warm-up.

By the fourth grade, we divide the

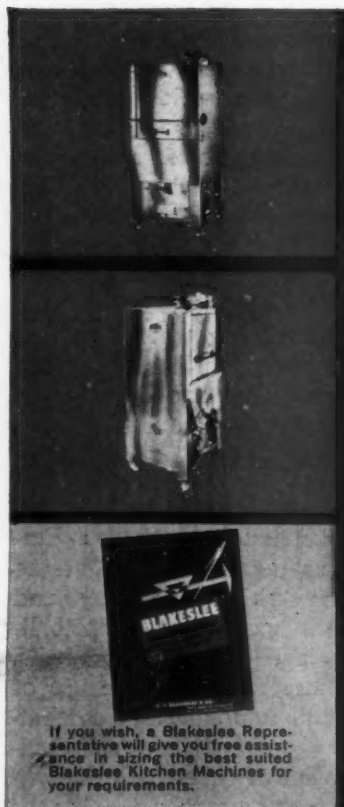




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boys and girls into separate groups and concentrate almost entirely on game skills. Football and wrestling are participated in by the boys. Soccer, field hockey, tumbling, basketball, square and social dancing, volleyball, softball, indoor baseball and track are activities participated in by both boys and girls. By the seventh grade, and through high school, emphasis is placed almost entirely on learning fundamental game skills and playing the games involved.

Testing is an important part of our program. We have always conducted the AAU and New York State tests of physical fitness and have now added the Kraus-Weber tests.

We do not by any means eliminate gymnastics and calisthenics from our program but we find that students have little desire to perform calisthenics for calisthenics' sake alone. However, in a competitive atmosphere, the student will extend himself a great deal.

To create this atmosphere we base all our testing programs on competition, whether it is competition with one's own best previous mark or with the top students in the class.

We believe that an important aspect of the physical education program is that it is the only area in which decisions must be made under emotional and physical duress. These decisions are most likely to appear under a game situation.

One final word. Many of the games we teach are what we call "carry-over" activities. These are such games as golf, tennis, badminton, table tennis and archery, that may be continued by students after they leave school. By teaching them the fundamental skills necessary to perform adequately in these sports, we feel that we are better equipping our students for their adult lives.

There is certainly a great deal of room for improvement in the physical education programs of our nation. And there is more than one way in which that improvement can be achieved. A good instructor, backed up by good equipment and an administration and board that understand the objectives of his program, can be successful, whether he uses games or calisthenics to build the bodies of his students. **End**



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## EXPLORATIONS

IN

## EDUCATION

On teaching the  
interesting sidelights

On junior high math

On spurring students  
who under-achieve

*The following case histories were submitted by readers in districts where schools are better utilizing staff, space or time. They are presented as part of a joint project with the Teacher Education Committee of the Massachusetts Association of School Committees.*

### **SATURDAY CLASSES FILL VOID FOR INTERESTED HIGH SCHOOLERS**

THERE JUST ISN'T TIME in the regular school day to teach everything we would like to get into our courses, and very often the most interesting sidelights are the ones that have to be eliminated.

This is the problem our school was trying to overcome in setting up special Saturday morning classes for interested students.

In order to make Saturday morning classes work we felt three elements had to be coordinated. First, we needed instructors willing to give time to the presentations. Second, student interest in the courses offered was a must. Finally, a sensible student-teacher ratio had to be maintained. We determined that in any Saturday class there could be no fewer than five students, no more than 20.

On the basis of teacher interest, we drew up a schedule of four classes to be offered on Saturdays. Included were creative writing, with an emphasis on poetry and essay writing; art, with emphasis on stone sculpture; biological science, with emphasis on hematology and bacteriology; and mathematics, where a long list of possible topics was prepared.

When students were informed of the availability of the Saturday classes, a small group approached us and requested that a course in electronics be offered. An elementary school teacher volunteered to teach the session, so we offered five possible courses. The question at that point was, what kind of student response we would get.

The sessions were scheduled for 10 weeks, two hours each Saturday. Students had to agree to come to classes and stay at least through the first hour, after which time they could leave if they wished. Parents had to give their consent to the courses and indicate their approval of the idea.

The results were better than we could possibly have expected. Fully 10% of our high school students—grades 10-12—are participating in the sessions. No

class has fewer than seven students and one—in art—has 18.

It is obvious that we have found a time of the week when the interesting sidelights in our courses can be offered—and it appears that a large group of our students is willing to give up the time to undertake some extra study.

*Reported by William Hurley, Jr., Principal, Taylorville High School, Community Unit School District No. 3, Taylorville, Ill.*

### **SENIOR SEMINAR STIMULATES DEEP THINKING IN STUDENTS**

A SEMINAR IN "critical thinking," inaugurated two years ago is proving a great success in the Marblehead, Mass., public schools. The purpose of the seminar is to develop the reasoning ability of students through reading and discussing selected social, political and philosophical writings. The seminar develops the students' ability to think "in depth" by encouraging them to express and defend their own views and to criticize the views of others.

About 12 seniors, selected by the principal, guidance director, social studies department head and discussion leader, are chosen to participate in the seminar. Selection is based on ability to gain from and contribute to the discussion. Students are screened from candidates proposed by teachers of junior subjects and class advisors.

The seminar is held on Friday afternoons to avoid conflict with other areas of the curriculum. Because paperback books are used, the total cost of materials has been approximately \$50. Works of Plato, Aristotle, American essayists, and philosophers around the world have been utilized.

The success of the seminar is illustrated by the high regard with which students hold it. Selection as a member is equal to "making the team" in varsity sports. Many non-members request permission to sit in on dis-

cussions and members often continue their discussions long after the actual meeting. Last year, juniors established their own seminar in imitation of what has come to be known as "the senior seminar."

We feel the seminar has been extremely successful within the time limits provided. We anticipate expanding the program and integrating it into our honors' group curriculum within the school day.

*Reported by Paul L. Walsh, history department, Marblehead High School, Marblehead, Mass.*

### **CLASS FOR UNDER-ACHIEVING SPURS STUDENT INTERESTS**

THE PROBLEM of bright students in the upper elementary grades who have little or no inclination to learn is a perplexing one in every school system.

Two years ago we decided to set up an experimental achievement-opportunity class which would bring together students in the fourth through eighth grades who, according to tests, were capable of doing better work than they were. The object was to provide them with whatever stimulus was necessary to spur them.

The class was limited to about 19 students in the five grades. All academic subjects, with emphasis on reading, social studies and science, were taught in the achievement-opportunity class. For such specialized subjects as art, physical education and music, students were grouped with their own age level.

Students are admitted to the special class on the basis of teacher recommendations, after testing by the school psychologist and principal. A minimum IQ of 100 is prescribed.

After two months, if there is no apparent change in the student's desire to learn, he is replaced in a regular

class, opening a spot in the special class for another student who might benefit.

The room chosen for the special class was much better equipped than an ordinary classroom. Other than this slight additional expense, the only costs to the school arose from paying a special teacher, but we felt that this would be more than made up if we could avoid having to re-teach students.

The class is now in its second year of operation. A number of students requested permission to remain in it for a second year and others, returned to their regular classes, are doing satisfactory work. Parents, too, favor the project.

Indications are at this time that the achievement-opportunity class is accomplishing its objective—to spur under-achieving students to accomplish the work of which they are capable.

*Reported by Superintendent Torrence L. Keeler and Principal Lucy N. Holman, Switlik Elementary School, Van Hiseville, N. J.*

### **MOVING MATHEMATICS AHEAD IN SEVENTH, EIGHTH GRADES**

SEVENTH AND EIGHTH GRADE arithmetic is one of the recognized "soft spots" in mathematics teaching. Ostensibly a period for consolidating control of fundamental operations and sounding out new concepts, actually it is often a period of standing still for many students. This is particularly true among those who learn the subject rapidly.

In the Ann Arbor, Mich., schools an attempt is being made in mathematics—and English—at the seventh and eighth grade levels, to offer a more stimulating and intensive course for selected students.

In any undertaking of this type, selection of the

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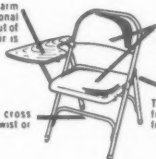


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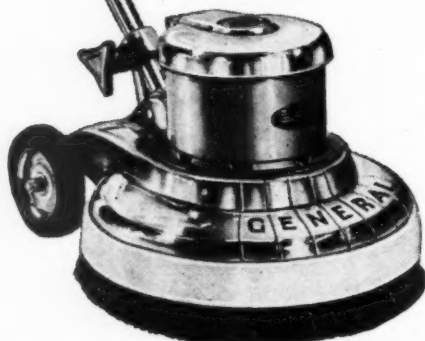
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(Circle number 740 for more information)

proper students is the most difficult, and important, step. We start our screening process near the end of the sixth grade. At that time, the teachers nominate about one-third of the students who will be entering junior high school in the fall, for consideration for placement in the special classes.

Nominations are made on the basis of high mental ability (usually an IQ of 120 or more); achievement test records over a number of years; a high estimate by the sixth grade teacher of the student's scholastic ability, his interest in the particular subjects for which he is being nominated, and the attitude of his parents.

A screening committee then uses the information supplied to form four class sections in mathematics and four in English. Two mathematics sections are composed of students who appear to be most able in arithmetic. Two include students who are sufficiently outstanding to have been nominated, but appear less able than the top group.

In English and social studies (these are taught together in the seventh grade as "unified studies") four sections are also formed, including the most able in two, the not quite so able in two others.

These eight sections are scheduled in a three-period block of time every day, so that students who are outstanding in one field and good in another can be easily accommodated. Scheduling this way also makes it easier to effect transfers when necessary.

Students in these special sections are given accelerated work that moves them well beyond the normal seventh and eighth grade courses.

In grades seven and eight the arithmetic program is extended (studied more broadly and intensively) in such areas as history of numbers, measurements and mathematicians; earning, budgeting and spending money; ratio and proportion; complementary and supplementary angles and geometric constructions.

This course of study has been added to in such areas as systems of numeration. The classes have had further work beyond their textbooks by assigning each member mathematical reports to be presented to the class. Another means of enrichment is that of regularly devoting a block of time each week to what is called "Math is fun." At these times students come prepared to present various kinds of problems to the class.

The special sections in the eighth grade, even with this enrichment and broadening, seem to have time available for more mathematics. In the present school year this time will be devoted to the study of algebra. When these students enroll next year in first-year algebra (again in specially selected groups) they will already have completed 10 to 12 weeks of their work in that course.

There has been an interesting side result of this work with the top quarter of our junior high school classes. As teachers have experienced success in working with the special sections, they have tried several of the enrichment units with regular classes and have found them to be satisfactory. While other units are beyond the capacity of the regular classes, the regular sections are getting a large part of the enrichment program.

*Submitted by Leverett Kelly, chairman, mathematics department, and Russell West, assistant superintendent, Ann Arbor Public Schools, Ann Arbor, Mich.*

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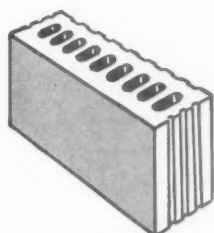


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**Card punch machines** are used to establish permanent payroll records in form of machine-readable code cards.

## Data processing for smaller districts

Here's how 47 independent school districts in Santa Clara County, Calif., have pooled resources to handle all payrolls and keep records up-to-date with a modern data processing center.

By O. D. RUSSELL

*Deputy Superintendent of Schools,  
Santa Clara County, Calif.*

■ ■ ■ Modern machine accounting techniques—usually within the reach of only the largest school districts—are saving time and money for 47 small ones in Santa Clara County, Calif.

Through a plan of cooperative planning, under the auspices of the county superintendent's office, they have established a data processing installation that works as a private "service center," providing certain free services and making machine and personnel time available for the districts to hire for specialized needs. (For example, all districts in the county—with the exception of the huge unified district of San Jose, which maintains its own data processing center—have discontinued preparation of their own payrolls. Punched card checks are issued ac-

curately and on time, at a cost to the districts of only \$3 per person for an entire year.)

While none of the districts involved have adequate paperwork volume singly to justify a complete data processing installation, their combined work—and funds—form the basis for a highly effective centralized machine accounting operation.

### Three important areas

Major significance of the centralized mechanized processing lies in at least three areas:

1. The scope of the accounting job is minimized in the local school districts, allowing local administrators to concentrate more on education and less on sets of accounting books.

2. Accounting information which the system provides is available exactly when it is due every month in more complete detail than ever before possible. Administrators thus can manage their districts, people and plants on the basis of more accurate and current information than they ever had before.

3. Records throughout the county are uniform, complete and accurate—regardless of how overworked a particular district's business office may be.

### Centralized payroll

The centralized payroll is the primary machine application, and the one which justified the installation of card punches, a card calculator (IBM 602A), sorters, collators, and two IBM 402 accounting machines,





This "service center" operates out of the Santa Clara County superintendent's office to serve the needs of the

47 independent districts under its supervision. No one of the districts is big enough by itself for machine operations.

as well as other assorted equipment.

The payroll covers more than 9,000 employees in the school districts. Master employee name and address, earnings rate, tax and deduction cards, are all punched and retained in a file in the processing center. About the middle of each month, our processing center collates these cards and runs them through an accounting machine to print what we call a "payroll order." This is simply a complete payroll for each school, as it would look if there were no overtime, no employee absences, and if all deductions were standard in accord with master records.

These payroll orders are sent out to the schools for corrections (reporting overtime, absences, changes in status, etc.). They are returned before the end of the pay period. New cards are then punched to reflect corrections.

#### Checks issued

The monthly payroll warrants (checks) are issued in the form of mechanically-printed IBM cards in ample time for release by the first of the month. Reconciliation for each school, as the checks are cashed, is mechanized. Summary

earnings cards are punched for complete withholding and social security tax reporting. All payroll deductions are handled mechanically in the department. In short, the individual districts have delegated most of their major payroll headaches to the county machine department.

#### Other areas

In addition to payroll help, school districts that want it (all but nine do) get:

- Complete detailed appropriation accounting. All payroll and accounts payable warrants are "distributed" by punched card code to proper accounts for each school. Detailed reports are printed each month, breaking all transactions down by category.

- Budgetary accounting. Budget figures for each school are punched into cards at the beginning of the year. Each month, reports are printed for each school comparing expenditures in the "year-to-date" to the district's budgeted expenditures to date.

Also listed are amounts still available by account classification and anticipated expenses yet to be incurred in the school year, by account. Budget adjustments, as au-

thorized by local boards, are reflected from month to month. From such a report, the school administrator can determine, at a glance, exactly where his system stands, where his problems are, how serious they are. He is in a forewarned position to begin correcting them before serious trouble of any kind develops.

- Almost as a by-product of payroll processing, our machine center maintains, on punched cards, teacher credential records, employee health records, and retirement account records. Periodically, these are reviewed mechanically to spot credentials due for renewal, employees due for chest X-rays, and other periodic requirements.

- Complete "special fund" accounting is mechanically maintained for each district. Amounts expended from each fund are reported each month, together with the balance yet in the fund.

#### Costs in proportion

We "time" each payroll, then bill each school district for its proportionate share of the processing time. Charges are based on machine and operator time only. The number of employees in each district determines the proportion of the total

cost each district pays. The county superintendent's office absorbs the cost of payroll forms, cards, and similar overhead items.

By California law, the county superintendent's office must make appropriation accounting services available to those local districts requesting it. Thus, no charge is made to the districts for providing this service mechanically. One high school district, Campbell, has purchased extra machine time to have our data department mechanize its student attendance records. In its

preliminary stages, this looks like a valid application holding considerable promise for other schools as well.

#### Grand jury recommendation

The system originally was installed as a result of a grand jury investigation. The jury recommended consolidation of a portion of the auditing functions of the county superintendent's office and similar functions of the county controller's office.

At the time, all local district

warrants (payroll and otherwise) originated in the districts and came first to the county superintendent's office for approval. After approval, and posting to proper books and ledgers, they were transmitted to the county controller's office where clerks undertook to repeat the same process.

The result was unnecessary delay in issuing warrants, inefficiency in handling, and duplication of effort between separate offices required by law to perform the same job.

With installation of our processing equipment, the county controller's office discontinued its duplicate set of books and assigned several of its people to the county superintendent's office. Thus both agencies audit the legality of transactions at the same time in the same place. Service to the districts is improved and the job of auditing is simplified.

#### Population explosion

In 1954-55, when we were studying the feasibility of our machine service center concept, the county's student population stood at approximately 82,000. This compared to 50,000 in 1948. The big student boom had clearly begun, and it was obvious to school planners that more efficient administrative methods were needed to accommodate it.

In 1956, the first year our IBM system operated, we wrote 72,395 payroll warrants and served a payroll of 5,700 employees. In all, we processed 124,000 warrants representing \$54 million that year.

By 1958-59, our student population had skyrocketed to 153,000, our payroll had climbed to nearly 10,000, we were operating or had under construction 246 school plants.

That year we wrote 172,000 warrants worth \$89 million! This included 106,402 payroll warrants worth more than \$31 million.

With our IBM system, the increased paperwork represented by this tremendous growth was handled with minimum bookkeeping and clerical staff expansion. Without machine accounting, we shudder to think what our situation might be today in the 47 separate school business offices of Santa Clara County.

**End**

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(Circle number 747 for more information)



# Portable rooms for crowded schools

*Schools in Memphis, Tenn., can get new, temporary classrooms—on demand—in just five days with this unique plan developed by the school board to supplement its permanent building program.*



**Demoports are easily** erected, can be transported to another site if necessary.

■ ■ ■ Demountable and portable schoolrooms are providing immediate extra space for crowded schools in Memphis, Tenn.

The "Demoport" schoolroom, developed by the school board, can be moved from place to place as a unit or can be unbolted, loaded on a truck, and set up again in another location. Even more important in these days of tight school budgets, Memphis schoolmen have cut overall costs by "doing it themselves."

A Demoport, 20 feet wide and 32 feet long, can seat 30-35 students and has a life expectancy of up to 15 years. The Memphis code allows only four in one "building," but actually, any number of rooms can be joined together. One Mem-

phis school is currently using seven in two "buildings" near the main school.

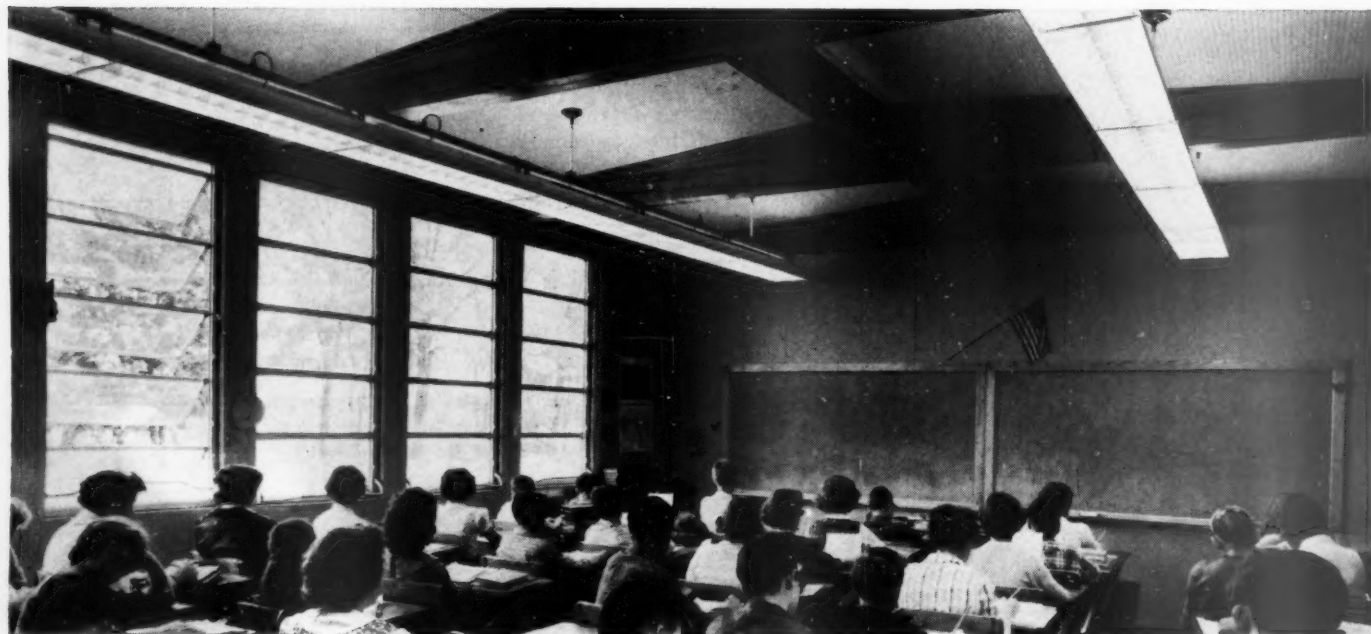
According to F. E. Oswalt, assistant superintendent for plant management, who is in charge of construction and installation, 30 Demoports are now in use in Memphis. Three of these have already been successfully relocated during this school year to ease overcrowding at a new school.

## **Advantages of Demoports**

But ease of transport from one site to another is not the only point in its favor. The Demoport can also be erected rapidly and inexpensively from pre-fabricated panels. In just two months, one building

crew in Memphis erected 23 new rooms and moved three others to a new elementary school location. It requires only five days of dry weather to take a single unit out of storage and erect it ready for occupancy. And the expense is not great. Each room costs approximately \$3,200 for fabrication and \$800 for erection. Relocation entails an additional cost of \$800.

Floor panels, roof sections and outside units are all built on a four-foot module. Because of this scale, and the flexibility of building components, any portion of a Demoport room can be moved to increase or decrease room space. Although all the Memphis structures are 32 feet long, the Demoport can be built in





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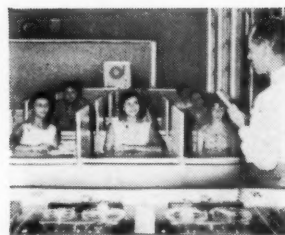
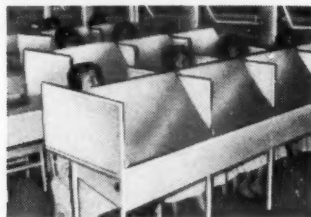
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any multiple of eight feet. Width is always 20 feet.

Lighting fixtures provide the same lighting standard required for permanent schools, yet entail minimum expense in relocation. With the help of a Memphis manufacturer, Light & Power Utilities Corp., a lighting system that has proven quite satisfactory was developed for the Demoports. A continuous pre-wired channel with plug-ins for each light fixture is suspended from the ceiling. Hangars for the fixtures can stay in place during relocation, and the fixtures themselves can be moved without dismantling.

The same flexibility is demonstrated in the other construction details. According to Oswalt, precision in the fabrication of Demoport components has to be considerably better than that of permanent installations. In laying the concrete block foundation, a high lime-content mortar is used to insure easy maintenance and cleaning later.

Interiors of the Demoports are done in pegboard so that the class can mount visual aids easily. Outside units, such as doors, windows, heating panels, etc., are completely interchangeable on a four-foot module. The windows are of the aluminum awning type and the warm air furnace with individual room thermostat is serviced from exterior.

I-beams run below each floor section to give added center support. The prefabricated roof sections are insulated and have a vinyl roof coating. Wall sections—also prefabricated—contain three inches of insulation and a vapor barrier.

Installation of a Demoport usually begins with the laying out of the building by a maintenance supervisor, one carpenter and one laborer. Then the carpenter and five laborers dig out the site and pour the footings for the block foundation. The site is next turned over to a bricklayer and two laborers who lay the block foundation on which the building is to be erected. Then an erection crew of three carpenters, one fork-lift operator and five laborers assembles the building on the foundation, hangs the chalkboards and installs the lockers, steps and sidewalks. Once the job is fairly well along, two electricians, two sheet-metal workers and one plumber provide the remaining mechanical services.

**End**



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(Circle number 723 for more information)

# A sensible solution to the "emergency leave" problem

Absence for personal reasons must—by law—be deducted from a teacher's pay. But emergency leaves can be granted in hardship cases. Here's how the school board in Monterey, Calif., handles them.

By DR. B. FRANK GILLETTE and  
MELVIN ISENBERGER

■ "My little girl was very sick and I had to stay with her. Can my absence be taken from my sick leave?"

■ "I couldn't teach because my plane was delayed coming back. Will I be deducted only the substitute teacher's pay?"

Such questions are often asked of business managers and personnel directors. Legally, their answers must be "No." Absence for reasons of family illness cannot be charged against a teacher's own sick leave. When a teacher misses service because of a late plane, he is "absent for personal reasons," and a full day's pay must be deducted whether a substitute teacher was engaged or not.

Though such personnel practices are far from just in many individual cases, most districts have no legally

acceptable alternatives. It is actually a mis-use of public funds to pay a teacher his full salary when he has been absent for personal reasons—unless some type of leave of absence has been granted.

## Granting leaves of absence

A teacher may request a leave of absence for any reason whatsoever. Whether his governing board will grant the request is another matter. What may be justifiable in the teacher's eyes may be regarded otherwise by the board.

Furthermore, any such request usually must be made in writing. It must be acted upon at an open board meeting and is subject to public reporting along with other board business. Most teachers would probably want to avoid the public announcement of their personal affairs which might be included in newspaper accounts of the board meeting. The general phrase "for personal reasons" could be used in place of the specific reasons for the leave request, but their names would still appear in the press reports.

In September, 1958, Monterey Public Schools initiated an emergency leave policy which—for us—has solved much of the problem. Acting under authority of the California Education Code, the governing boards of both the elementary and high school districts agreed upon the following points:

■ Emergency leave up to three days per school year can be granted to certificated personnel with no deduction for the first day's absence and deduction of the substitute teacher's pay only for the remaining two days.

■ Emergency leave may be taken on different occasions during the year or at one time but shall not be cumulative from year to year.

■ Acceptable reasons for emergency leave include serious illness in the immediate family, religious observances and personal hardship.

## How well has the policy worked?

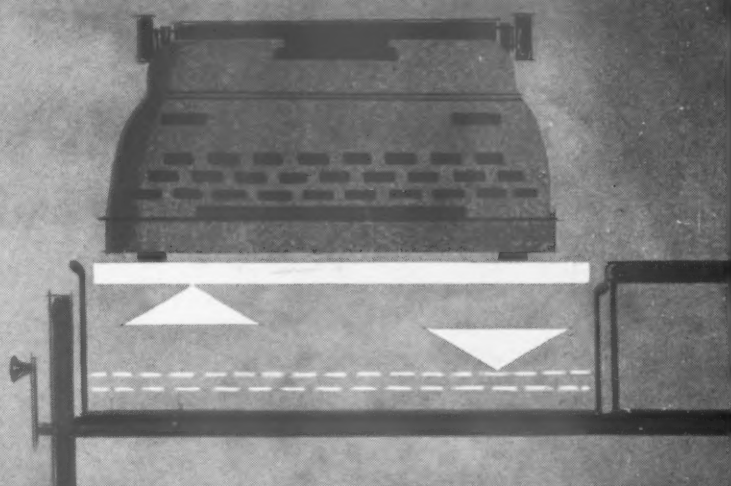
During the 1958-59 school year, some 55 teachers out of a total certificated staff of more than 500 took  
*continued on page 98*

## About the authors

Dr. B. Frank Gillette is assistant superintendent in the Monterey Public Schools, Monterey, Calif. Melvin Eisenberger is business manager in the same district.

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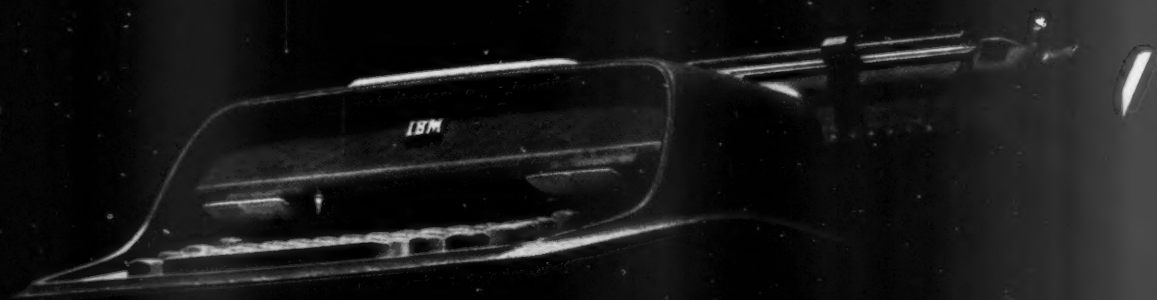
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The perfect teaching typewriter, the IBM Electric offers many features to help the student raise his standard of performance. For example, the responsive "Buoyant Keyboard" lets him adjust key pressure to his individual "touch," thereby reducing finger fatigue and helping him develop increased confidence and skill.

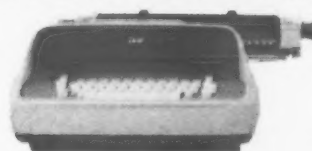
### **CUT CLASSROOM CLATTER**

Even the sound of the IBM Electric is right. Working with sensitive recording instruments, IBM engineers have filtered out all harsh noises while preserving the low, smooth sound needed to maintain typing rhythm.

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Why not have our local representative show you the IBM Electric and tell you about the facilities of IBM's Educational Services Department. We feel sure your school will want to take advantage of the experience and the exceptional services that have made IBM the leader in the electric typewriter industry.

## **THE IBM ELECTRIC**



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## this 16-row telescoping gym seat installation is operated MANUALLY



New Safway telescoping gym seat installation at Menomonee Falls High School, Menomonee Falls, Wis.; architects—Kloppenburg & Kloppenburg, Milwaukee. Seating set-up shown is duplicated on the opposite side of the gym (total capacity 2,370).

# SAFWAY

## TELESCOPING GYM SEATS

**quickly opened to any required number  
of rows or closed to clear the floor**

EASY OPERATION of Safway telescoping gym seats means lower handling costs every time you change your set-up. With Safway's straight-line tracking, manual operation is practical for most installations—even the big 16-row bleacher shown above.

Other Safway features are extra-large wheels, non-sticking nylon glides, fewer moving parts and less metal-to-metal friction.

**SPECTATOR COMFORT**—Ample foot and knee room; inclined seats; good view.

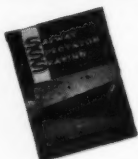
**COMPLETE SAFETY**—For spectators, gym users and maintenance personnel.

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advantage of the new policy. Many of the 55 asked for emergency leaves for only a half-day or a single day; others used up the entire three days.

Has the policy been hard to administer? No, except at the point where personal hardship had to be defined. Where is the line drawn between "personal convenience" and "personal hardship"? If a teaching mother stays home to care for her sick child, a case can be made for personal hardship. But if the child's grandmother is available to act as the nurse, the line between convenience and need becomes very thin. This is something which the administration must determine somewhat arbitrarily in each individual case.

In Monterey, the assistant superintendent has ruled on all of the cases. Appeals can be taken to the superintendent and the governing boards. So far, the certificated staff has shown a strong support of the policy and no appeals have been made.

As a result, the boards have been spared a number of decisions on leave requests—decisions which undoubtedly would have been based upon administrative recommendation anyway.

### Areas for further study

After operating our emergency leave policy for a year, we have found certain areas that bear further study. Among them are:

1. The need to refine the term "personal hardship."

2. There is an apparent inconsistency in making no deduction at all on the second and third days of absences when no substitute is employed. Under our present policy, vice-principals, counselors, librarians, etc., have an advantage over teachers.

3. The need to develop a method of obtaining corroboratory details on a request for emergency leave, without arousing the ire of the individuals concerned.

Despite these drawbacks, we are eminently satisfied with our policy. Teachers certainly have not taken undue advantage of it and it has allowed us the freedom to deal properly with genuine hardship cases, without the necessity of cutting a teacher's income or doing battle with state law.

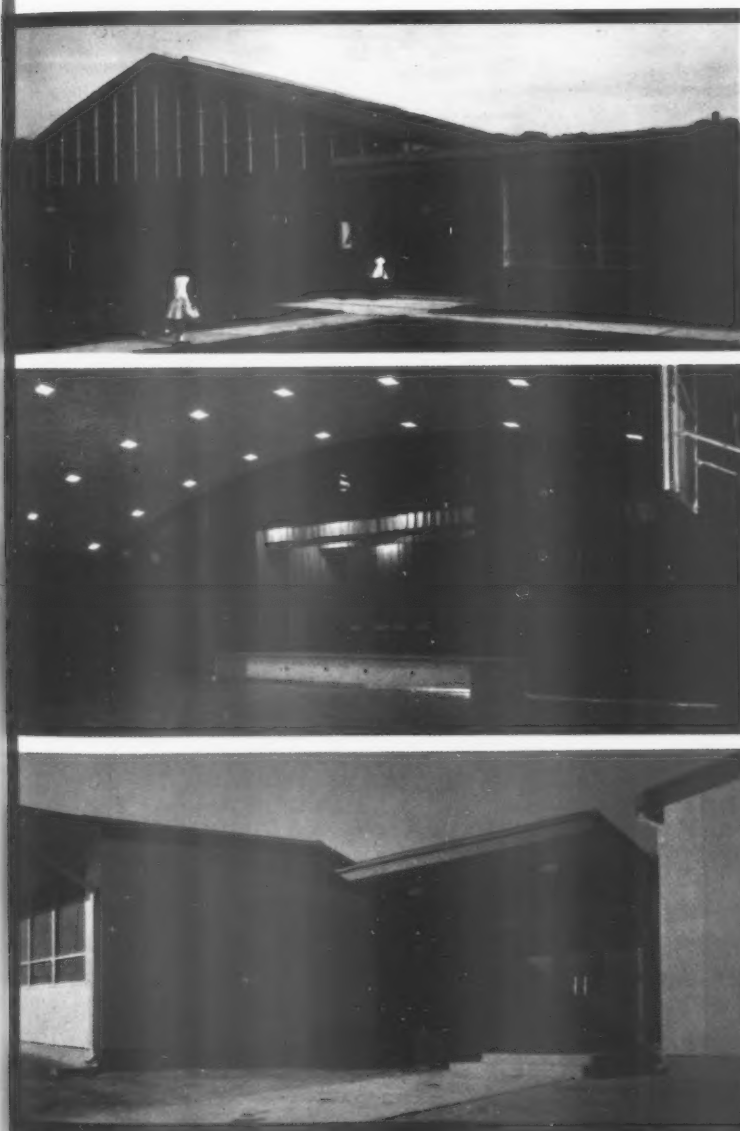
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**New SV4019 Conventional Chassis**

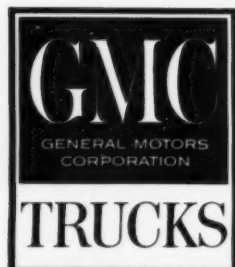
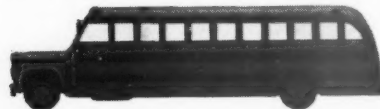
- 1** Stronger, stiffer frames
- 2** Wider front tread . . . up to 14 feet shorter turning
- 3** Maintenance-free torsion bar front springs
- 4** Safer stops with bigger brakes, standard
- 5** Quieter, vibrationless engine mountings
- 6** New, exclusive V-6 engines—longer life, greater economy
- 7** Larger, smoother-acting clutches
- 8** True progressive rear springs, standard
- 9** Smoother riding with new independent front suspension
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# THE FIRST INSTALLMENT OF SCHOOL MANAGEMENT'S **COST OF EDUCATION INDEX**

The School Management



**A yardstick for measuring your district's financial effort**



The first Cost of Education Index ever to be built on a weighted sample of all U.S. school districts has just been completed.

This pilot study is more than a massive accumulation of facts and figures. It is designed to be a dynamic and purposeful tool in the hands of local school administrators and local boards of education. It also demonstrates the urgent need for an even more comprehensive index to assist federal and state legislative bodies concerned with the elusive problems of federal and state support for public education.

Here's what it will help you to do at the local level:

1. Compare your district's over-all costs with those of others in your region.
2. Compare your expenditures for specific items like transportation, teachers' salaries, administrative costs, food service, etc., with other districts of your own size in your own locality.
3. Discover the areas in which you appear to be over-extending or under-expending, and help you uncover the reasons why.

Finally, with a little ingenuity and interpolation, it will give you a rough yardstick of how much you might want to spend in terms of the wealth of your own district, to provide your youth with a "good" public education.

The Index has limitations, too. It won't tell you the *quality* of your educational product. Qualitative measurement can't be calculated simply in terms of dollars and cents. But, since most reasonable men will agree that there is a positive correlation between price and quality, it will help you estimate the probable worth of your school's educational program.

#### **What is a Cost of Education Index?**

You are probably familiar with the Consumer Price Index. It measures the buying power of a consumer's dollar in terms of what the same dollar would have purchased in 1940 or 1950. By combining today's prices for a variety of basic commodities, it provides an index of what a dollar will purchase today as compared to a dollar a decade ago.

CEI (Cost of Education Index) operates in a similar fashion. It measures the ebb and flow of an "educational dollar" in terms of what it buys today for the same "product" as compared to a previous year.

Why do we need such a yardstick? This simple illustration should suffice. In 1940, a certain community in New York State was spending approximately \$200 per pupil for its educational program. In 1959, this community was spending approximately \$600 per pupil. New

#### **HOW THE COST OF EDUCATION INDEX WAS BUILT**

Hundreds of school districts participated in building SM's Cost of Education Index. Each filled out a detailed four-page questionnaire which itemized expenditures for dozens of budget items, for a two-year period (1958-59 and 1959-60).

The questionnaire itself was devised by Dr. Orlando F. Furno. Furno's early work at Columbia University, and particularly his involvement as a statistical research analyst in the Institute of Administrative Research, Columbia University, established his reputation as an educational research statistician. Dr. Furno is presently at the U. S. Office of Education. It was at his suggestion, and with his guidance, that this project was developed.

The final total of school districts used in

the carefully weighted sample was 583. Each was selected because it represented, by virtue of geographical location, size, and cost per pupil, a randomly selected unit of measurement. The accumulated data is being processed on an IBM electronic computer.

Many education indexes have been suggested—and actually prepared—before, but none has assumed the proportions of this effort. Although SM's CEI is still only a "pilot" effort (it may be hoped that a federal agency such as the Office of Education will eventually undertake a continuous study), this sample is so great, and so far exceeds the demands of statistical probability, that it may be used with reasonable confidence on a national and regional basis.



## your district's financial effort

York, which has its own "cost of education index," finds that \$530 of that \$600 was used to reproduce the 1940 program. Only \$70 went into program improvement. In other words, over the 20 year gap, this community invested only \$3.50 more per year per pupil to improve education and to stay abreast of new developments.

Obviously, it will be a lot easier for a superintendent and school board to explain an increase of \$70 per pupil as compared to \$400 per pupil.

But a single "index" figure has limited value at the local level except as a barometer of a school district's *over-all* financial effort. SCHOOL MANAGEMENT's CEI will permit you to isolate *components* of your budget and to measure their increased cost. For example, if you know your present *per pupil* expenditures for teachers' salaries, and if the Index shows that salary costs have gone up 10% in the last few years, you can see if your own per pupil expenditures for teachers have risen accordingly. If they've gone up 10%, too, you are at least keeping pace with inflation. This permits local officials to explain to their taxpayers, in very exact terms, WHY the tax rate has increased. The district has merely kept pace with the times—just as a housewife keeps pace when she must pay 27¢ today for the same quart of milk that she bought for 24¢ a few years ago.

### Keeping up with the Jones's

Unfortunately, no yardstick has ever been developed to tell a school district how much it *should* spend to provide a "quality" educational program. In fact, no one can even define "quality education" in terms acceptable to everyone.

The best one can do is to *compare* his district's efforts to buy the dozens of different ingredients that go into his budget with the efforts of other districts with similar characteristics. For example, he can compare his over-all and specific costs with districts of similar *size*. He can further narrow this comparison by comparing with districts of the same size in the same *geographical* region. In addition, if he chooses to, he can compare on a basis of size, geographical location, and cost per pupil. Finally, he can compare any one of dozens of specific

expenditures (*see list of items covered by SCHOOL MANAGEMENT's CEI on page 105*) using all three of these factors.

To bring this into focus, let's examine a practical situation that might well arise in a typical suburban school district. Over a period of a few years there has been a noticeable increase in the turnover of the district's high school teaching staff. The board and the administration have been studying the problem by examining the obvious and usual causes such as housing, marriage, pregnancy, salary level, etc. They find they are competitive with other districts in their area as far as salary schedule is concerned. There appears to be no noticeable change in the "natural" or social causes that might be accelerating the turnover rate. So they look to some of the CEI figures to see if they can diagnose some hidden reason for their trouble.

First, they establish that they are paying a professional salary that is a little above "par" for their size and area. Next they look at staffing adequacy—the number of pupils per classroom teacher. Here they find they're out of line—the "average" district of their size, in their area, has a ratio of 25 pupils per teacher. They are approaching 29. This is a significant factor—but it isn't enough to prove the case because they know that some of their immediate neighbors are actually exceeding this 29-1 ratio. Moreover, 29-1 isn't intolerable—it doesn't exceed what might be considered the "tolerance band." In fact, although it exceeds "average," some 40% of the schools of their size in their area, with their per pupil expenditure, have as high a ratio as 29-1.

So they look farther. They examine their expenditures for educational materials—books, maps, lab equipment, tape recorders, etc. Now they get a shock. They find they are in the lowest 10% here when all other things are equal! So their conjecture goes something like this: "Our relatively high salary schedule attracts good teachers. Our pupil-teacher ratio, while it isn't good, isn't intolerable. But our teachers can't cope with the heavy load using inadequate facilities, old textbooks, and without important mechanical or electronic aids."

While this is, admittedly, a "pat" situation,

it isn't improbable. The inter-relationship of these three factors—average professional salary, staffing adequacy, and educational materials expenditures—has a definite influence on attracting and holding good teachers. Moreover, research by such organizations as the Associated Public School Systems has established a strong positive correlation between these three items and educational *quality*. Nor does the analysis of our school district have to stop here. Using the figures compiled in the CEI they can probe such factors as administrative costs and clerical expenditures to further the measurement of their commitment to "Keeping up with the Jones's."

#### **What the CEI won't do**

There is a very real danger, it should be pointed out, in expecting CEI to help you establish a proper expenditure level for your district. *It simply reports what others are doing financially, and it provides a yardstick by which you can measure whether or not you are keeping up with rising costs.* It does *not* take into account what you *should* be doing to meet the challenge of modern educational needs and technology. Nor does it reflect, directly, how much your district should be doing in terms of its *ability* to pay.

On page 107 you'll find a method for correcting your "score" in terms of your district's ability to pay. It isn't an exact method, but it will sharpen your understanding of the problem and provide a useful tool in dealing with hostile elements who, when they see your figures to be high (if they are), accuse your board and administration of over-spending.

#### **How the Index will be presented**

The list of items for which figures have been assembled is reported on page 105. Obviously, more data is being accumulated than could possibly be presented in a single issue of this magazine. We are endeavoring to present the most immediately useful data in the next three or four issues, with an eye to application at the local level and for its value to legislators who are now groping with the problems of providing assistance to financially strained or exhausted districts. Thereafter, significant cross-correlations will be presented on a monthly basis as new data is collected.

For this first presentation we have focused on the broad national picture. In succeeding articles we'll come in close on:

1. Salaries to professional personnel, and costs for strictly "educational" items.
2. Plant operation and maintenance.
3. Special services (such as transportation and feeding).

There are many ways to measure educational costs, but one of the best is in terms of net current expenditure per weighted pupil unit. This is a favored yardstick because it provides a common denominator to compensate for such differences as sparsity of school population and the cost of educating a high school student compared with an elementary pupil.

The table on the opposite page shows, for two years, the national cost per pupil for 26 different items found in almost every school district budget. It also shows the percentage that each item is of total *current* expenditures. "Total current expenditure" excludes items like debt service and capital investment. In effect, it presents those expenditures which are *elective* and occur year after year.

#### **Nine categories**

The 26 items fall into nine major categories—administration, instruction, attendance services, health services, plant operation, maintenance, fixed charges, other services, and transportation.

Included in fixed charges are such items as contributions to employee retirement funds, insurance and bonding costs, rental of land and buildings, interest on current loans, and other charges of that nature.

Lumped together as other services are such items as food service expenditures and student body activities that come out of current operating funds.

#### **Finding net current expenditure**

Because transportation costs vary so greatly from district to district—and because this is an auxiliary service—they are eliminated from total current expenditure to obtain "net current expenditure." It is this latter figure that is most important to schoolmen.

As can be observed, there has been very little change in the two years in the percentage of current funds allocated to each of the 26 areas of expenditure, despite the fact that the net current expenditure per pupil has risen almost 6%. Thus, it appears, if your district's budget breaks down in approximately the same ratio as this one, you are conforming very closely to the national pattern. If there are any major points of difference, they may be very good ones, but you should be aware that they exist and sure that they are intentional.

The factors that will provide a Cost of Education Index now begin to emerge. In subsequent issues, when we discuss the regional and district size differences for each of these 26 items, you will be able to make more valid comparisons with your own district's experience.










*text continued*



# Education Picture—1959 and 60

The School Management



BUDGET CATEGORIES	AVERAGE COST PER PUPIL		PERCENT OF TOTAL CURRENT EXPENDITURES	
	1959	1960	1959	1960
 <b>ADMINISTRATION—Total</b>	\$ 11.81	\$ 12.20	4.1%	4.0%
Professional Salaries—Administration	6.34	6.41	2.2	2.1
Secretarial and Clerical Salaries—Administration	3.46	3.66	1.2	1.2
Other Expenditures—Administration	2.01	2.13	.7	.7
 <b>INSTRUCTIONAL COSTS—Total</b>	\$209.66	\$221.74	72.8%	72.7%
Professional Salaries—Instruction	190.65	202.21	66.2	66.3
Secretarial and Clerical Salaries—Instruction	2.88	3.36	1.0	1.1
Teaching Materials	10.66	11.29	3.7	3.7
Other Expenditures—Instruction	5.47	4.88	1.9	1.6
 <b>ATTENDANCE SERVICES—Total</b>	\$ .28	\$ .31	.1%	.1%
 <b>HEALTH SERVICES—Total</b>	\$ 1.73	\$ 1.83	.6%	.6%
Salaries—Health Services	1.15	1.22	.4	.4
Other operating expenditures Services	.58	.61	.2	.2
 <b>PLANT OPERATION—Total</b>	\$ 27.94	\$ 28.98	9.7%	9.5%
Custodial Salaries	15.26	15.86	5.3	5.2
Heat for Buildings	4.90	4.88	1.7	1.6
Utilities, other than heat	5.18	5.19	1.8	1.7
Other Operating Expenditures	2.60	3.05	.9	1.0
 <b>MAINTENANCE COSTS—Total</b>	\$ 9.79	\$ 10.67	3.4%	3.5%
Maintenance Salaries—School District Employees	2.88	3.05	1.0	1.0
Other Expenditures—Maintenance	6.91	7.62	2.4	2.5
 <b>FIXED CHARGES—Total</b>	\$ 8.93	\$ 9.76	3.1%	3.2%
 <b>OTHER SERVICES (Food Service, Student Body Activities, etc.)</b>	\$ 5.76	\$ 6.70	2.0%	2.2%
<b>NET PER PUPIL EXPENDITURE LEVEL</b>	\$275.90	\$292.19	....	....
 <b>TRANSPORTATION SERVICES—Total</b>	\$ 12.10	\$ 12.81	4.2%	4.2%
Transportation Salaries, School Dist., Employees	3.74	3.97	1.3	1.3
Other Expenditures—Transportation	8.36	8.84	2.9	2.9
<b>NATIONAL AVERAGE TOTAL</b>				
Current Expenditures per Pupil	\$288.00	\$305.00	100%	100%

## HOW THE U. S. EDUCATION DOLLAR IS BEING SPENT, 1959-60



A glance at the pictorial graph on this page (see above) shows how the U. S. educational dollar was allocated in the school year 1959-1960. The figures are interesting, but it is important that they be evaluated for what they are—nothing more than the *distribution* of the dollars being expended at the local level to educate children in kindergarten through the 12th grade. The chart merges the experience of districts in various parts of the country, districts of widely varying size, and districts with unlike educational objectives. Some of the districts provide bus transportation—others don't. Some have a chief administrator, others do not. So don't jump to conclusions. Don't try to make comparisons of this breakdown with your own district's figures, yet. Comparisons can be made later, using more meaningful facts.

### HOW TO BEGIN TO COMPARE

The table on page 107 presents the average net expenditure per pupil for each of the nine different regions of the U. S. The national net

expenditure per pupil is \$292. If you live in Massachusetts, you'll see that your area (Region 1) is "high" in comparison to the national figure. If you live in Mississippi (Region 6) you'll find that you're quite "low."

Before drawing any conclusions about the respective *effort* you're making in your district, it would be well to consider some of the tangibles and intangibles that affect your position. For example, consider the actual *financial ability* of each of these nine regions to provide its children with educational dollars. One index of this *ability to pay* is the "per capita personal income" of the population. It isn't the only measure, but it's a good one. We find that Mississippi's region, which spends only \$178 per pupil, is actually spending 12.4% of its per capita personal income for education. Massachusetts, which spends much more per pupil, is spending 12.2% of its per capita personal income on education. Using this yardstick, the gross difference in *effort* is negligible.

"But isn't it true," you might ask, "that a dollar goes farther in Mississippi?" The answer to that isn't as easy to produce. Now some important intangibles enter the picture. There are substantial differences in *standard of living* between regions, and these mean a dollar *appears* to go farther. There are differences, too, in such things as building costs and, in some cases, food prices. But textbooks cost just as much in each area. And teachers, who *are* paid less in Mississippi than Massachusetts, spend just as much for life insurance, automobiles, and appliances.

In making allowance for the ability of your district to pay more or less than the figures shown in this table, you must also take into account your individual characteristics. In this regard, you can get additional help from several other sources. For example, *Sales Management* magazine publishes, each year, county wealth figures. These are available in almost any good business library or, perhaps, through the sales office of a large corporation in your town. They'll permit you to pinpoint, on a county basis, how your county stands in your *region*. You can narrow the gap even more if you merely look about you at adjacent communities and grade yourself on a basis of relative wealth.

This term "relative wealth" doesn't just apply to per capita personal income. If yours is a new suburban community, you may not have adequate tax support behind each student to warrant high expenditures without extreme sacrifice on the part of local residents. Some communities—particularly those that *do* have high per capita personal income—are able to spend more with little effort. In others there is both unwillingness and inability.

So, if you are beginning to compare, don't forget *ability to buy* before you jump to conclusions.

*text continued*

## IN WHAT REGION IS YOUR DISTRICT LOCATED?



**REGION 1:** Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

**REGION 2:** New York, New Jersey, Pennsylvania.

**REGION 3:** Ohio, Indiana, Illinois, Michigan, Wisconsin.

**REGION 4:** Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

**REGION 5:** Delaware, Mary-

land, Dist. of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

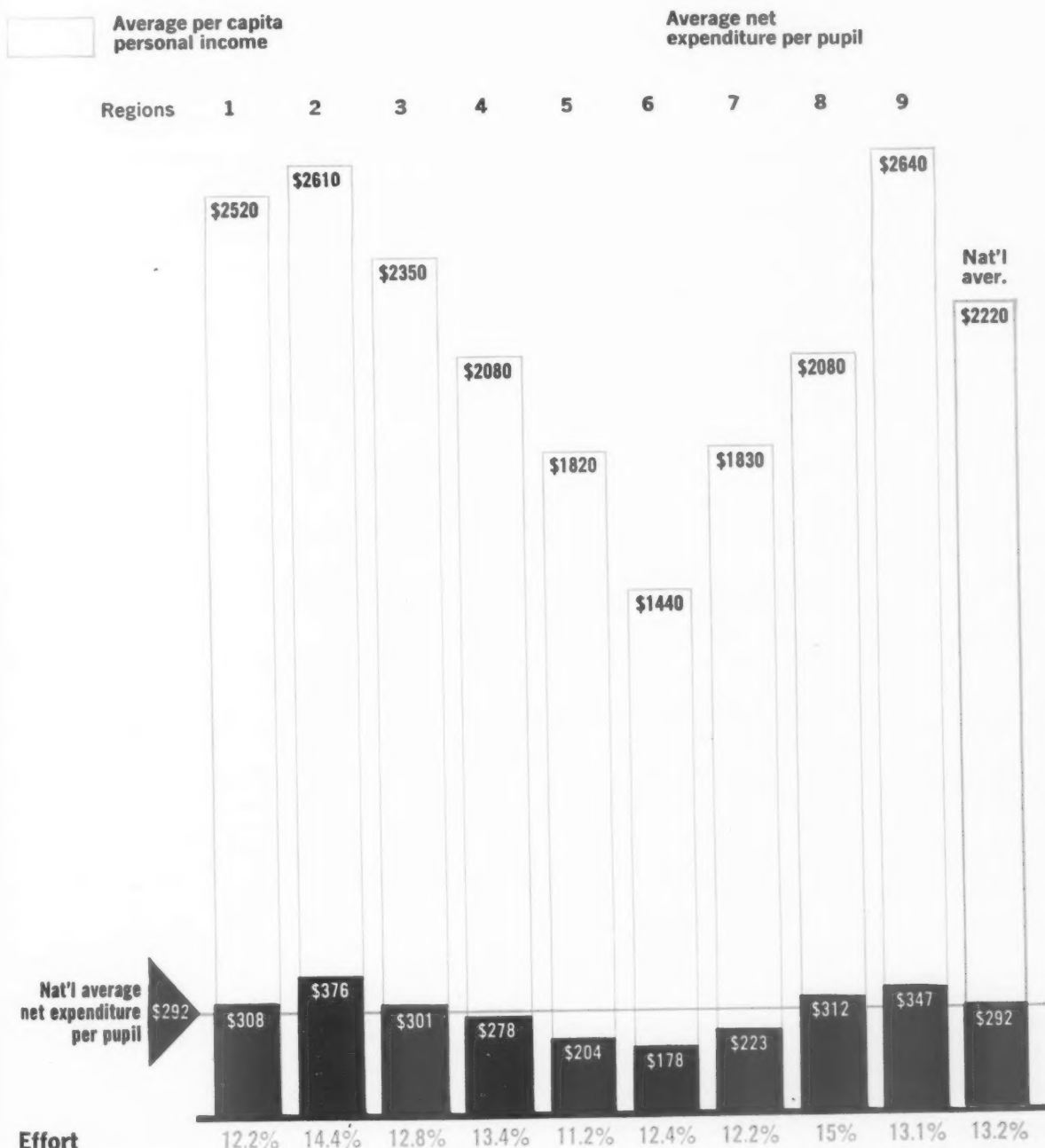
**REGION 6:** Kentucky, Tennessee, Alabama, Mississippi.

**REGION 7:** Arkansas, Louisiana, Oklahoma, Texas.

**REGION 8:** Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.

**REGION 9:** Washington, Oregon, California, Alaska.

## ARE YOU SPENDING AS MUCH AS YOU COULD?





Earlier in the article, the very real danger of comparing your district's expenditures with the "average expenditures" was pointed out. The figures in SCHOOL MANAGEMENT'S CEI only show *what is actually being spent*. Quality—how much *should be spent*—is not considered now.

Thus, even on a regional basis, there is no particular reason for complacency if you're "average." Nor is there necessarily reason for concern if your expenditures prove to be above the average. As a matter of fact, if you agree with most schoolmen that education in the United States is not what it ought to be, you

may feel that you have reason to be concerned if your district is *not* well above the average in your region.

#### What does average mean?

Average, as it is being used here, is really the median, or the point on the expenditure scale that half the districts are above and half below. Thus, if your district is spending the national "average" per pupil, fully half of the other districts in the United States are spending more.

This is dramatized in the charts that follow. The first one (*see arrow opposite page*) shows

### WHAT ABOUT THE EFFECT OF DISTRICT SIZE?

The chart on this page shows how district size affects per pupil expenditures. It reflects the expenditures for all districts within a given group on a national basis. It does not compensate for regional differences.

We have introduced it only to demonstrate that there is no constant arithmetical progression, up or down, as districts grow larger or smaller. When detailed budget items are examined, the effect of size will be demonstrated.

For example, it can be recognized, by logic, that the per pupil cost for "administration" could be influenced by the number of pupils. In a smaller district, the salary of the chief administrator must be spread over fewer pupils than in a larger district. But a larger district may have many "administrators" and, conceivably, have a higher per pupil investment in administration than its smaller next-door neighbor, while paying less per pupil on salaries.

#### COST PER PUPIL, 1959-60 By size of district

##### Number of pupils

Above  
25,000

12,001  
25,000

6,001-  
12,000

3,001-  
6,000

1,201-  
3,000

601-  
1,200

300-  
600

##### National average

\$292

\$298

\$307

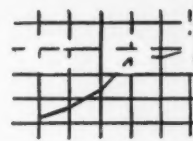
\$319

\$300

\$297

\$264

\$268



the average amount per pupil being spent each year by more than half the districts in the nation. If your district is spending more than this amount, it is "Above Average."

But this same chart also shows that 25% of the districts in the nation are spending more than \$351 per pupil annually. This group, the "Quality Quarter" is made up of districts that are not satisfied to be just average or slightly above.

Finally, the chart also shows that the "Top Tenth" of the districts are spending more than \$431 annually per pupil! In other words, each one of these districts is spending almost half as much again per pupil as an average district.

But comparing your district to the national average, while it may be enlightening, is not necessarily fair. As shown earlier (*see page 107*), not every region has the same ability to pay actual dollars for education, and the district in South Dakota that is, perhaps, spending 15% of its per capita personal income on education, may not even rate nationally as average in per pupil expenditure, while a selected New York district spending less than 10% of its per capita personal income on education may be in the national Quality Quarter or even Top Tenth.

For this reason, under the arrow is a regional breakdown of per pupil expenditures.

You can now see how much you must spend per pupil to be Above Average in your own neck of the woods. What must your expenditures be to put you in the Quality Quarter, and what does it take to reach the Top Tenth?

If you're willing to accept the general premise that, in most districts, you get more if you pay more, you can *begin* to place yourself qualitatively by using the regional tables on per pupil expenditure.

### Two examples

To see how this works, let's take two districts, one in Pennsylvania and the other in Mississippi. The Pennsylvania district spends \$380 per pupil annually and the Mississippi district \$280.

The Pennsylvania superintendent can look at the *national* figures and feel pretty good. His district ranks well up in the Quality Quarter. On the other hand, if he looks at the figures for his area, Region 2, he gets a bit of a jolt. His district is spending just \$4 per pupil more than the *average* district in his area. There may be any number of reasons for this—many of which will be discussed in forthcoming articles—but the fact remains that in its own area, this district's expenditure is hardly Above Average.

How about our man in Mississippi? Nationally, he doesn't rank at all, falling below the

### HOW MUCH ARE WE SPENDING PER PUPIL?

	Average	Quality quarter	Top tenth
Nat'l	\$292		
Region			
1	\$308	\$350	\$392
2	376	463	557
3	301	345	390
4	278	319	368
5	204	250	336
6	178	201	238
7	223	274	305
8	312	353	417
9	347	379	429

national average. But in his area, Region 6, his district is a giant. Only 10% of the districts in Region 6 are spending more than \$238 per pupil! Certainly this district's expenditure per pupil of \$280 is outstanding. It may be able to provide as good an educational program for \$280 per pupil as the Pennsylvania district can for \$380.

Don't pat yourself on the back yet. There are many other yardsticks to be used in measuring your district. Let's compare how well you are paying your professional administrators. (This category includes superintendents, assistant superintendents, business managers and other professionally trained members of the central administrative staff. It does *not* include building principals, guidance officers, librarians, etc., all of whom are listed as members of the *instructional* staff.)

According to the arrow (*see page 110*), half the districts in the United States pay their professional administrative personnel an average of \$7,642 per year. This figure is not the total amount paid for administrative salaries by the district. To get a comparative figure in your district, you must add all the salaries paid to professional administrators and divide that by the number of people involved.

To get into the Quality Quarter nationally,

your average administrative salaries must be \$12,877 annually. The Top Tenth spend at least \$17,084 per person on administrative salaries each year.

Again, these figures, while interesting, can be deceptive. It is necessary, for one thing, to

#### HOW WELL ARE WE PAYING OUR ADMINISTRATORS?

	Average	Quality quarter	Top tenth
Nat'l	\$7,642	\$12,877	\$17,084
Region			
1	\$9,051	\$10,907	\$12,922
2	9,351	11,433	14,149
3	8,046	10,788	12,863
4	6,930	10,965	15,596
5	8,206	9,945	11,638
6	7,917	9,978	10,736
7	6,833	9,977	12,920
8	8,954	10,048	11,035
9	11,276	13,991	16,240

look to your own region to see how you rank with the schools around you. Moreover, other factors that are not shown in this chart, have to be considered.

For example, District A may have just one administrator who is being paid a salary of \$15,000 per year. This would put that district into the Quality Quarter salary-wise, nationally and in any region. Moreover in seven regions, it would rank in the Top Tenth.

District B could have a superintendent and two assistant superintendents, at a total annual expenditure of \$30,000 (\$15,000 for the superintendent and \$7,500 for each of the assistants). Its average expenditure on administrators' salaries would be \$10,000 per year. This amount is not high enough to place this district in the Quality Quarter, either nationally or in six of the regions.

Now, if both districts have the same number of students, which one is better staffed in its administrative area? Obviously, the district with three administrators—assuming the quality of the personnel is equal—is better staffed than the district with one.

#### LET'S COMPARE "HOW MANY" ADMINISTRATORS

So a new factor has been injected. How many professional administrators do you have per 1,000 students? Does your district have enough?

Going back to districts A and B, if each had exactly 1,000 students, District B, with three administrators per 1,000, would rank in the Top Tenth nationally (*see arrow below*). District A, with one administrator, would rank Above Average nationally.

Looking at the regional picture, District B's three administrators would put it in the Top Tenth in all but Region 3. District A, while it would never rate in the Top Tenth, would appear in the Quality Quarter in three of the regions.

So now you have two guides to the rating of your district—by region and nationally—in the

#### DO WE HAVE ENOUGH ADMINISTRATORS?\*

	Average	Quality quarter	Top tenth
Nat'l	.78	1.80	2.79
Region			
1	.63	1.00	1.85
2	1.26	2.21	2.90
3	1.30	2.45	3.31
4	1.13	1.95	3.00
5	.33	.65	1.31
6	.44	.73	1.65
7	1.24	2.09	2.78
8	.79	1.58	2.32
9	.51	1.13	2.62

\*Figures shown are administrators per 1,000 students.

matter of administrative staffing. Many others, such as percentage of net current expenditure apportioned to administrative salaries and ratio of administrators to teachers, remain to be discussed.

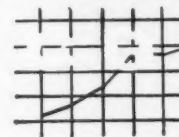
Almost as important is the help administrators have. Going back to Districts A and B, if the single administrator in District A has five clerks and secretaries to help him, his job will be considerably eased. If District B's three administrators have no clerical help, they may be badly bogged down in detail. These questions will be taken up in future articles.



How about your instructional staff? Is it being paid up to the national average? And what kind of a load do your teachers have?

For purposes of this study, professional instructional staff includes—in addition to class-

cated in Regions 4, 5 6 or 7, there's a good possibility that teachers in the district next door are eyeing your salary scale with the thought of improving themselves. As a matter of fact, in Region 6, if you are paying an average of \$5,114, teachers in more than nine out of 10 neighboring districts are being paid less than teachers in your own.



### HOW WELL ARE WE PAYING OUR INSTRUCTIONAL STAFF?

	Average	Quality quarter	Top tenth
Nat'l	\$5,114		
Region			
1	\$5,262	\$5,665	\$6,001
2	5,621	6,291	6,961
3	5,266	5,879	6,664
4	4,694	5,426	6,238
5	4,117	4,774	5,502
6	3,819	4,331	4,586
7	4,470	4,988	5,345
8	5,288	5,700	6,099
9	6,152	6,802	7,211

There are almost always two sides to an issue. There are many more than two sides to the question of your instructional staff. If you're feeling pretty good because your average annual salary puts you in the Quality Quarter you had better look around again and see how you rate by some other measures. For example, how many members of the instructional staff do you have for every 1,000 students? (Always keep in mind that this is *not* a pupil-classroom teacher ratio. This is the ratio of pupils to teachers plus other members of the instructional staff.)

The arrow (*see below*) shows that if you have 50 instructors for every 1,000 students (more conventionally, a pupil-instructor ratio of 20-1), your district ranks in the Quality Quarter nationally. If you have 40 instructors for every 1,000 students (a 25-1 pupil-instructor ratio), you are giving your instructional staff a heavier load than more than 50% of the nation's districts.

The regional aspect must be considered here,

room teachers—principals, consultants or supervisors, school librarians, audio-visual, guidance, psychological and television instructional personnel.

Let's look at the arrow (*see above*). If the figure in your district for instructional staff salaries is above \$5,114, you are paying more than half the districts in the United States. On the other hand, if it is below this figure, your district is paying less than half.

Remember, these are not starting salaries, nor are they only the salaries of classroom teachers. They include the salaries of usually higher paid specialized instructional personnel, too.

To get into the Quality Quarter nationally, your district's average must be \$5,825 per professional instructor, or better. The Top Tenth are paying their instructional staff members \$6,674 on the average.

Once more, regional variations must be considered. If your average is just \$5,114, you rank right in the middle nationally, but if you're in Regions 1, 2, 3, 8 or 9, chances are you're losing teachers to your neighbors. If you're lo-

### HOW HEAVY A LOAD ARE WE GIVING OUR TEACHERS?\*

	Average	Quality quarter	Top tenth
Nat'l	43.86	40	52.77
Region			
1	44.42	46.44	49.58
2	45.28	50.88	54.29
3	40.73	44.36	48.40
4	42.20	45.35	48.70
5	41.02	43.90	46.13
6	38.72	41.82	46.49
7	40.77	44.72	47.09
8	41.38	45.94	51.00
9	39.38	43.48	46.00

\*Figures shown are instructional staff per 1,000 students.

too. The district with a 20-1 ratio (50 instructors per 1,000 students), would be greatly envied in most parts of the country. But in Region 2, it would have to improve somewhat before it could get into the Quality Quarter.

#### LET'S COMPARE TEACHING AIDS

##### ARE WE SPENDING ENOUGH OF OUR BUDGET FOR TEACHING SUPPLIES?

	Average	Quality quarter	Top tenth
Nat'l	3.87%	5.69%	6.74%
Region			
1	2.30%	3.28%	4.70%
2	2.67	3.65	4.54
3	3.10	4.55	6.52
4	4.16	5.97	7.05
5	1.97	2.83	4.02
6	2.04	3.54	5.06
7	1.98	2.98	5.00
8	2.57	3.71	4.91
9	3.86	4.90	5.64

Now how do you stand in the matter of instructional staff? Let's say your district is just about average. It has 43.86 instructors for every 1,000 students and your staff pay averages \$5,114. What tools are you giving your instructors? How much of your annual net current expenditure is going for instructional materials and supplies?

If you've used up all your money staffing your district and have nothing much left over with which to buy supplies, you may find your district being left behind. As the arrow shows (*see above*), you should be apportioning almost 4% of your annual current expenditures to instructional supplies, if you want to remain among the average districts of the nation.

If you want your district to be in the Quality Quarter, it will take 5.69% of your budget to make the grade. Of course, in your particular region that kind of an expenditure may put your district way up into the Top Tenth. To become a member of the national Top Tenth, if your district can afford it, 6.74% of the net current expenditures must be for instructional supplies. Even that would leave you only in the Quality Quarter in Region 4.

Of course, the percentage of your annual net current expenditure apportioned to an item can be deceptive, too. The lower the budget, obviously, the less you need to spend per pupil to achieve the Quality Quarter.

#### LET'S COMPARE COST OF MATERIALS

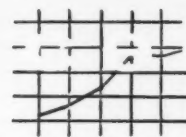
The real question before your district is "Are we spending *enough* per pupil on instructional supplies?" The best teachers need help to do their jobs as well as they can, and many judge their districts by the supplies they have available.

If \$11.29 per pupil is being spent annually on instructional supplies, your district is at the national median (*see arrow below*). If your district is spending that much and it is located in Region 5 or 6, you rate in the Top Tenth. In Region 4 or Region 9, your expenditure level would leave a great deal to be desired.

Now, looking back, your district may be very attractive to professional instructors if you have enough well-paid administrators, if your instructional staff is paid average or above average salaries and is not trying to cope with too many students. On the face of it, if the percentage of the total budget spent on instructional supplies is also Above Average, you should be operating a district that is very attractive to teachers and other members of the instructional staff. But if the *amount* spent on instructional supplies is low, your district may be losing some teachers it would otherwise get.

##### ARE WE SPENDING ENOUGH PER PUPIL ON TEACHING SUPPLIES?

	Average	Quality quarter	Top tenth
Nat'l	\$11.29	\$16.44	\$19.63
Region			
1	\$7.28	\$9.75	\$15.10
2	9.54	13.13	16.80
3	8.92	14.91	21.35
4	11.50	17.00	20.30
5	4.07	6.94	10.40
6	3.88	7.13	8.65
7	4.30	8.36	12.70
8	8.14	10.75	16.20
9	12.63	17.13	22.87



And what if the amount spent on teaching supplies is high? Does this guarantee that the best teachers and principals will be beating a path to your door? Not necessarily, because

Any "index," to have maximum value, should reflect a long-range trend. Since the base year for SCHOOL MANAGEMENT's CEI is 1958-1959, we can provide only a two-year experience.

But even in this short period, net educational costs—on a per pupil basis—rose 5.9%! In '58-'59, the net cost per pupil was \$276. In '59-'60 it's running about \$292.

Can one assume that this rise of \$16 per pupil was purely inflationary? How much of it might be attributed to an actual increase in educational *betterment*, provoked by conscious competition with Russia or the impact of the Conant Report?

As this article goes to press, additional computer runs are being devised to provide answers to these questions. At best these can be only guidelines to help you apply the national picture to your own district. However, some interesting observations are possible using the data already available.

For example, let's try to estimate the effects of inflation.

In each year covered in this survey, instructional salaries made up about two-thirds of the *total* budget. The amount spent on these salaries rose 6% in that period—\$11.56 per pupil.

It is an accepted fact that teachers have been underpaid for many years. Moreover, in recent years they have become a scarce commodity on the job market and school districts have found it necessary to raise salaries to attract and hold good teachers. Further, since teacher pay is very directly affected by the rising cost of living generally, it is reasonable to assume that a good part of the rise in instructional salaries was due to inflation. But how much?

Here we must turn to another yardstick. The government has an Index of Professional Salaries. Teachers, as professionals, are included.

It is estimated that during the last 12 months all professional salaries rose 5%. It would be fair to assume that this was almost totally the result of inflation—pressure from professional men to add to their incomes to keep up with the rising cost of living.

Since *all* professional salaries went up 5%, and instructional salaries rose 6%, it would appear that 1% of the rise in instructional salaries was directly related to educational betterment.

Unfortunately, it is not that easy. Instruc-

there are many other factors yet to be considered. It is these that will be taken up in subsequent reports on SCHOOL MANAGEMENT's Cost of Education Index study.

tional salaries are below the level of other professional salaries and are only beginning to catch up. The 6% increase in instructional salaries added only \$277 annually to each teacher's pay. The 5% increase in all professional salaries resulted in a rise of \$317 per person annually. So, actually, the rise in instructional pay must be attributed almost entirely to inflation—to trying to catch up, and keep up, with professional salaries and the cost of living.

If we agree that almost the entire rise in instructional salaries was due to inflation, what is left? We find that per pupil expenditures, excluding instructional salaries, actually rose only \$3.44 in the last year, slightly more than 1%.

Again, from government estimates, we know that during that same period the Consumer Price Index—the index of things we buy—went up 2%. According to this, per pupil costs *didn't even keep up with inflation*, much less result in educational betterment. But this, we know, isn't true. A new slide projector contributes to educational betterment, whether or not its price is affected by inflation.

This analysis is an over-simplification. We can draw no clear-cut conclusions here. They will have to come much later, when experts have had a chance to analyze all the figures brought forth in SCHOOL MANAGEMENT's CEI study. And even then the only truly valid conclusions will be the ones reached for your own district.

But this much is obvious. Up till now, no national index has been available to really help analyze school costs. Only a valid Cost of Education Index can do this job. That is the direction in which this pilot study is leading. **End**

#### COMING IN MAY

The next step in presenting School Management's CEI study is to bring you some detailed cost breakdowns, by region and district size, for the full list of 26 items which we reported. Our present schedule for presenting this data:

**May**—Administrative, professional, and clerical salaries; instructional materials.

**June**—Plant maintenance and operation.

**July**—Special and auxiliary services.



By BRUNO A. CASILE  
*Director of Instruction,  
West Deer Township, Pa.*

Let citizens see



their schools in action



Here's how one school district has successfully brought its school program and problems home to the taxpayers by arranging to bring community leaders into the schools.

■ ■ ■ Citizens are no longer satisfied to be passive partners in the running of the public schools. They want to know what is being done, what can be done, and just what is the general state of the schools as compared with the schools of the past and those of other communities.

Annual reports, radio and TV programs, PTA meetings, brochures and newspapers are effectively used to inform the public about the schools and their activities.

But these media are not sufficient. They don't provide the personal touch or "contact" which is neces-

sary for the development of real understanding. To compensate for this, our district has started a program of citizen visits to the schools.

The program provides for the invitation of a select group of citizens to spend a complete day as guests of the school district.

Each visitor is given an opportunity to learn about the schools, largely through what he sees, hears and actually experiences. The visitors see for themselves, in their proper setting, the available instructional materials, equipment and aids. They observe teaching methods and procedures. They have the

opportunity to become personally acquainted with teachers, supervisors, and administrators.

#### **Two visits scheduled**

Two visitation days were scheduled to get the program underway. The first was set for the beginning of the first semester and the second at the end of the first semester. Each visiting group was limited to 20. Representatives from service, fraternal, and auxiliary organizations made up the first group; the second was chiefly professional people.

The visitors reported on the day of the visitation at 9:00 a.m. Stu-

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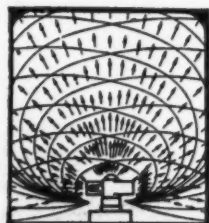
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"Citizens want to cooperate with schools."

dent guides greeted them as they entered the school building and accompanied them to the administrative office. A 30-minute informal social "get-acquainted" session was held. Coffee, tea and cookies were served.

Following a brief orientation period, which included the presentation and explanation of the day's schedule, the guests were divided into groups of four. An administrator or supervisor was appointed to act as guide for each group. Schedules were arranged so as to avoid, as much as possible, any interrup-

ticipants. For example, most admitted they had no idea how drastically teaching methods had changed since their own school days. They found that many of the activities labeled "frills" by critics of modern education are worthwhile experiences. The most frequent comments were on the increasing costs of education and the quality of education provided in our own school district.

The general reaction of our guests toward the visitation program was summarized by one who said: "The thing I liked best about the program

"If we could just put a school that is typical of our best in a show window, and take it around to local communities in this country, then we might do a better job of selling . . . If we can't use the show-window device, then we must find other methods whereby citizens can see what the best schools look like. [We must show them the] physical plant, but even more important, the curricular offerings, the tools of instruction, pupil achievements and teachers."

Lawrence Derthick, U. S. Commissioner of Education  
in the December, 1959, issue of School Management.

tion of the regular school program. The program included a tour of the school plant, visitation of classrooms of the visitors' choice, observation of teaching methods, and a lunch period in the school cafeteria.

During the tour our visitors were encouraged to ask questions of both teachers and students.

## Summing up

The visitors, administrators, supervisors, and those teachers who had no assignments or duties, joined together during the last period of the day to exchange ideas and viewpoints related to the day's experiences. In the opinion of all participants, this was the most valuable phase of the program. Visitors had the opportunity to receive answers and explanations to specific questions about all aspects of the school program. Opinions, views, and criticisms were expressed in an atmosphere of complete freedom and frankness.

The pattern of remarks reflected the sincerity and interest of the par-

was the opportunity for me to see classes in action and to talk informally with teachers."

Another told us: "As patrons we want to help. By participating in such a program as this we can understand and appreciate the work our teachers are doing. It helps us to increase our confidence in our schools and teachers. . . . I am convinced that, if citizens would become actively interested in their schools and took the time to learn more about them, there would be no so-called critical attacks against our schools."

More and more citizens are becoming involved in educational matters. They want and demand the privilege to work cooperatively with educators to plan and develop good school programs. As partners, they seek the opportunity to gain first-hand information about their own schools. We feel confident that our school visitation program will prove to be one of the most effective ways to supply this information.

End





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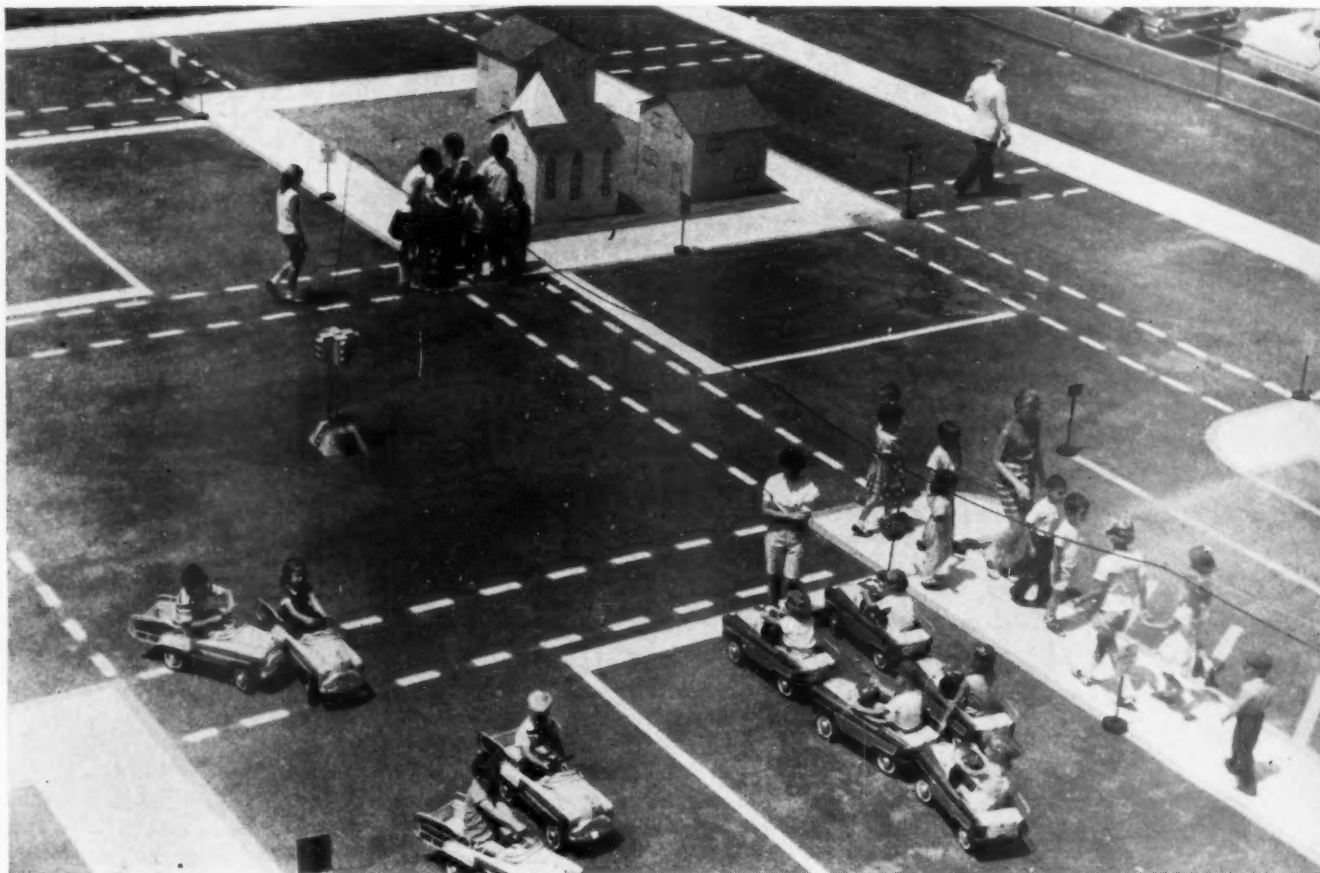
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# Model town promotes tra



Toy cars, operating  
signal lights, crosswalks  
and street layouts  
help pre-schoolers  
learn their traffic  
ABC's in  
Elyria, Ohio.

■ ■ ■ Pre-school tots in Elyria, Ohio, now receive traffic safety training at a time when it will do them the most good—in the summer months just before their first trip to kindergarten.

Elyria Safety Town is a cooperative venture—sponsored by the community's City Club in cooperation with the PTA council, supervised by the local police department and set up each summer on the black-topped playground of Hamilton Elementary School. Most traffic conditions and hazards are reproduced in a model town layout, including electrically-operated signal lights, a railroad grade crossing, street intersections, sidewalks and crosswalks and the variety of traffic signs normally encountered.

Enrollment in the safety program

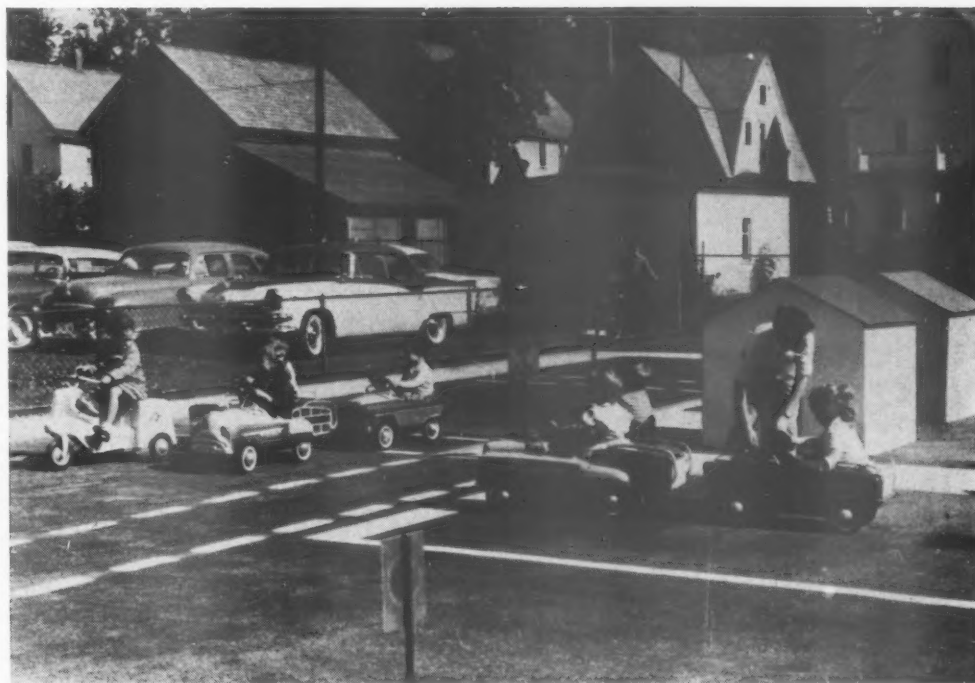
is voluntary. Parents register their children by mail and are responsible for transporting them to and from Safety Town to attend the two-hour daily sessions which extend over a two-week period. Youngsters who successfully pass their pedestrian and "driver" safety tests receive diplomas at the graduation exercises ending each session.

City patrolman James Oster, who directs the safety town program, is assisted by teen-age instructors who have received extensive training beforehand in the handling of pre-school youngsters and in the fundamentals of traffic safety. The instructors—drawn from such groups as Future Teachers of America, Girl Scouts, Boy Scouts and "Y" members—each handle five students during a two-week session.

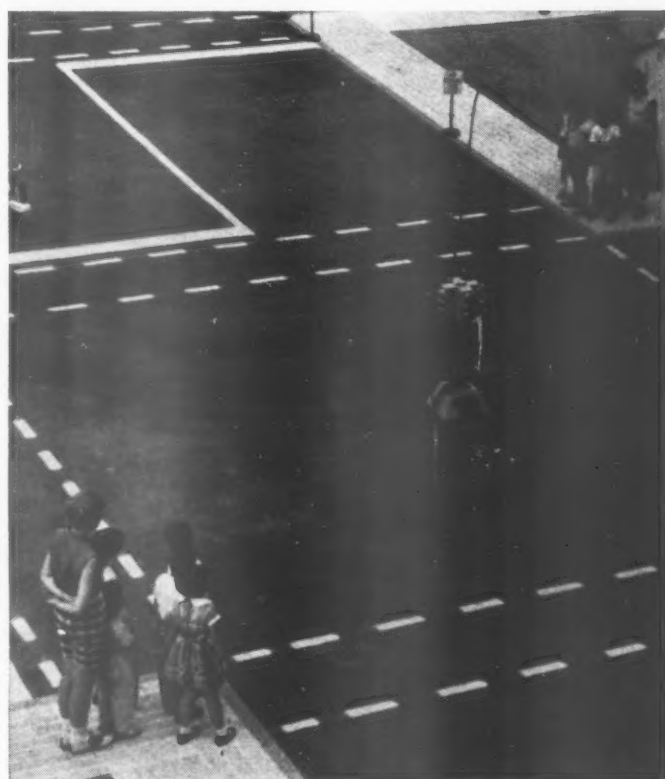
# s traffic safety

Youngsters learn  
about safe  
driving . . .

"Driver" training forms  
an important part of  
Elyria's safety program.  
Pre-schoolers learn to  
obey traffic rules in toy  
autos.



. . . and safe walking in Elyria



Teen-age instructors handle groups of five  
children each, teach them the elements of  
pedestrian safety on model town's streets.

They supervise the youngsters in  
both "driver" training—with toy  
automobiles—and pedestrian safety.

Parents are most enthusiastic  
about the program, according to  
Maurice C. Flood, chief of police.  
Flood is convinced, too, that the  
program—in effect for the past two  
summers—has contributed directly  
to the town's fine safety record. In  
1959, Elyria, with 10,862 school  
children using the streets and side-  
walks daily, had no traffic fatalities  
involving youngsters five to 14 years  
old, only 10 injuries resulting from  
auto accidents and 12 injuries in-  
volving bicyclists.

One possible reason: Parents of  
Safety Town graduates have to  
drive more carefully, lest their five-  
year-olds give them lectures on basic  
safety rules. **End**



By R. HENRY CAMPBELL  
*Superintendent, Mad River-Green Local Schools  
Springfield, Ohio*



No one really liked eating in our crowded, noisy cafeteria, and these seventh-graders were no exception. Almost 800 students used to jam into this one, designed to serve 100.

# Cafeteria rush eliminated by school lunch carts

In one Springfield, Ohio, school 780 students used to crowd into a cafeteria designed for 100. Now, through the use of lunch carts, students eat hot lunches in the relative quiet of their rooms. The result: more food consumed, a cleaner, quieter school and extra time for teaching.

■ ■ ■ All of the problems associated with crowded lunchrooms have been eliminated in the Enon Elementary and Junior High School of Springfield, Ohio, through the use of a hot food cart.

Gone are the days of rushing to the lunchroom, gulping part of a meal and then running to the schoolyard to play. Our students now are served hot meals quietly in the relaxed atmosphere of their own classrooms. They eat all their food, they spend a short period in their rooms reading or studying and then, in good order, they go outside for a 20-minute free period.

## **Rush, rush, rush**

There are 780 students in the Enon school. The cafeteria seats a maximum of 100. Before we instituted our lunch cart system, in order

to feed all our students, we had one word of the day: "Hurry!"

Children sitting at the tables needed only to look up at the long lines of hungry schoolmates to know why they had to hurry. Waste and accidents were at a maximum. Few students were able to finish their meals in time, much less let them settle.

And then there were other pressures. When six boys sit at the same table in the cafeteria, one with a football under his arm, the amount of food consumed by each is governed by the speed with which one of them can gulp down his lunch, grab the ball and yell "let's go."

That was the situation two years ago. It was obvious that something had to be done. One solution, build a bigger cafeteria, was out of the question. We are a growing district

and have had to use all our bonded capacity to build new classrooms. Enlarged cafeterias were a luxury we could not afford.

## **Transporting food**

Since we lacked an adequate cafeteria in which to serve food, we reasoned that it would make sense to bring food to the children in their comfortable classrooms. To handle this we purchased a hot food service cart capable of serving 90 plate lunches.

A cart load of plates can serve four classrooms in a little less than 20 minutes. One cook and a helper handle the cart and serve the meal. Students come into the hall in line, take their plates and bring them back to their desks. Students who bring their own lunches also eat at their desks.

## Hot lunch carts



Third-graders line up at the lunch cart in the corridor outside their room for hot plate lunches. One such cart can easily serve four classrooms in a little less than 20 minutes time.

## Quiet, comfortable lunch



A fifth-grade class enjoys its lunch in the quiet and comfort of its own room. Those who get hot food from the carts and those who bring lunch from home eat at their own desks.

About 20 minutes after the food has been served, a clean-up cart is wheeled through the halls. Trays, refuse and utensils are deposited in the cart, which is handled by students from the seventh and eighth grades. A pail of warm water, a sponge and drying cloth are on the cart, ready for use in case there has been any spillage.

After the clean-up cart has passed, students return to their desks for a 20-minute reading or study period. Then they are released for a 20-minute mid-day play period on the school grounds.

### What has happened

When our lunch cart plan was first introduced, it was greeted less than enthusiastically by teachers, cafeteria personnel and custodians. Major areas of concern were that teachers would lose their noon break and that food would be spilled over rooms and halls.

After a year's operation of the lunch cart system, all of our staff is convinced that it works. Children eat more slowly and they eat *more*. The building is quieter and neater than before. The usual confusion of crowded halls and noisy lunchrooms has been completely eliminated.

There have been other side benefits of more than passing interest, too. For one, teachers are able to use the lunch periods to discuss, and practice, proper health habits

and rules of etiquette and courtesy.

The school public address system carries good music, selected by teachers and the principal, during the noon hour. Teachers can have this music piped into their rooms and many use the time for impromptu music appreciation.

Teachers, too, benefit under the new system. Lunchroom monitoring is a thing of the past. Teachers now sit down and eat in a relatively quiet room. We find that teachers who enjoy their work also enjoy this opportunity to relax informally with their students.

And, finally, we find that the quieter lunch hour also gives students a chance to calm down a little. They still get a period of play at mid-day, but this comes after food has been digested, when they can exercise more comfortably. The result, in the afternoon, is that students seem more receptive to learning, less fidgety. Our late-afternoon discipline problems have lessened.

### How about costs?

Good food service carts will cost anywhere from \$500 to \$3,000, depending on the size and type of cart desired. We purchased a cart for \$600, but it had been used for one year. New it would have cost \$1,200. It has proven perfectly adequate for our needs.

We are so convinced of the success of our program that we have

eliminated a cafeteria from plans for a new eight-room school. We will construct a modern kitchen and room to handle the food carts. The space originally reserved for a cafeteria will be used for a much needed music department.

We feel that we have found an economical and sensible way to provide a hot lunch to our students and teachers in an atmosphere that encourages good eating habits, relaxation and goodwill. **End**

Seventh- and eighth-graders deposit trays, utensils and refuse on clean-up cart as it passes through the hall.





JEAN MILLER, School Lunch Director  
Battle Creek Public Schools  
Battle Creek, Michigan

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SM



FOOD CLINIC

Richard Flambert answers your feeding questions

### QUESTION: Are most cafeterias over-equipped?

■ Some months ago a statement was made by a food service supervisor that most school cafeterias are over-equipped. This statement was publicized and resulted in a tremendous controversy among interested people throughout the nation.

Actually, our opinion is not so much that cafeterias are over-equipped as that the people charged with the responsibility for putting in school cafeterias have not kept up with technological advancement.

There is more to a kitchen than equipment. There is the question of what the equipment is to do. The proper equipment to do the job efficiently and economically must be found. For example, there are architects, superintendents, food consultants and cafeteria supervisors who feel that hand washing of dishes is economical. There are some who think that a mechanical rack type of dishwasher is best. There are some who think that because of the advent of prepared potatoes and instant potatoes that a peeler is obsolete. Others think that a peeler is required not only for potatoes but for vegetables such as

carrots. There are some who think that a 60- or 80-quart mixer is best for mixing in one batch. There are others who prefer a 20- or 30-quart mixer with the idea of making several small batches. There is a difference of opinion regarding the kinds of ventilation, hoods, sound-proofing, air conditioning, etc.

We do not think many cafeterias are over-equipped, but we do think most are ill-equipped.

No food service program or design should be undertaken without first determining a menu pattern of food items that might be served. From this, the size of the kitchen, the work pattern and the kind of equipment best suited to do the job can be determined.

One important factor that is frequently overlooked is that, unlike a commercial restaurant, a school cafeteria is expected to last for many years without major replacements, frequently as long as the building lasts. It is false economy to put in galvanized iron sinks which require replacement every few years when a stainless steel sink will last for 20 or 30 years.

### QUESTION: Should a district subsidize its cafeterias? If so, to what extent?

■ In order to answer this question properly, it is necessary to review the whole background of school food service. From humble beginnings in basements, with PTA mothers preparing and serving simple food to school children, the food program has grown into the serving of many millions of meals daily. In the case of one system, the Los Angeles schools, a manufacturing kitchen has been designed which is cooking and freezing all meat prod-

ucts and transporting them to over 425 school cafeterias.

One of the reasons for this remarkable growth has been the realization that the school lunch offers perhaps the best meal a child receives during the day and at the lowest cost. It is obvious that an undernourished child makes a poor student. It is also obvious that without some form of subsidy a well balanced and complete lunch cannot be served for 25 or 35 cents. This



**About the author.** Richard Flambert is a partner in the firm of Flambert and Flambert, San Francisco, St. Louis, Omaha and Chicago, food service consultants and engineers specializing in schools and institutions. He is president of the International Society of Food Service Consultants.





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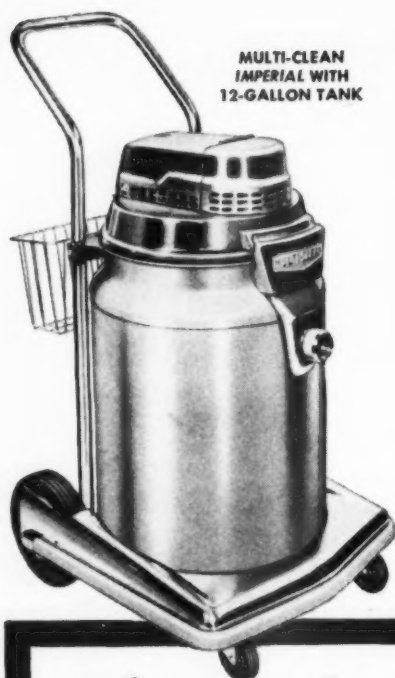
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**And what about other features?**

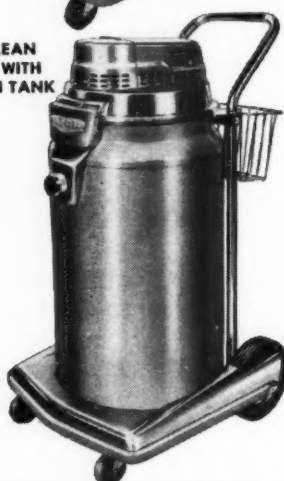
Other important advantages you gain when you buy a Multi-Clean IMPERIAL: By-pass motor cooling system . . . automatic shut-off to protect motor from water . . . improved design of clamp which holds power head . . . large wheels which facilitate moving up and down stairs or from building to building . . . wide choice of attachments.

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subsidy in past years was covered mainly by a large government food subsidy program as well as a state milk subsidy program. During the past few years the government program has declined to an alarming degree, and most school districts are in the red.

Because there is no uniform system of accounting in the schools, it is frequently impossible to compare districts as to costs and efficiency. For example, a few districts charge the cafeterias only with food processed, absorbing payroll and overhead. Some districts charge food and direct payroll, absorbing indirect payroll such as supervision, accounting, purchasing and overhead. In some programs the salaries of all people whose work includes cafeteria operations are charged to the cafeteria account, including the director or supervisor of food service. In some districts there is no charge made for overhead. In others, charges for social security, utilities, replacement of equipment, depreciation, small stores, uniforms and laundry, etc., vary from zero to as much as 10% of the cost of operation.

For this reason it is difficult to assess the success or failure of a cafeteria program.

There has recently developed a philosophy of thought and a drive for action to charge only food to the cafeteria, the thought being that employees should be charged to the district the same as classroom teachers and clerical staff. One of the arguments presented is the fact that the classroom does not result in a profit and is completely subsidized; therefore why should the food services be compelled to operate on a profit and loss basis?

This goes to the heart of the question. Just what are the advantages of a food service program? In addition to the serving of nutritious food, the cafeteria represents a practical application of nutrition. It introduces young people to new foods; it teaches better table manners and habits; it compels consideration for others, and all children meet as equals. These things are important. Whether they are important enough to justify the expenditure of sufficient money to create a subsidy is for the judgment of each individual school board. **End**



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*A monthly review of ideas, new products and helpful hints*

### ▶ Are parent-teacher meetings important?

How important are parent-teacher meetings? Robert Hudson, a social studies teacher at Camelback school in Phoenix, Ariz., kept track of the names of parents who visited him during the school's open house evening. He then used this list to cross-check the grades that students in his class earned during the first marking period. Here are the results:

The children of 44% of the parents who attended, earned 1's, the equivalent of an "A." The children of 28% earned 2's; 16% earned 3's and 12% earned 4's. No children of parents who came to school failed. Mr. Hudson reports that he did give failing grades to 19 students, but none of their parents visited the school.

It's hardly a scientific sampling, but the results would seem to show a high correlation between parental interest in school and the grades their children get.

### ▶ Schools get teeth into dental program

A dental health program now in its 11th year in Rye, N. Y., public and parochial schools has been termed a great success by Superintendent Wendell Hoover. Hoover reports that better than 97% of all students enrolled in the town's seven schools are under the care of a dentist or have completed their dental work.

Every member of last year's graduating classes had taken part in the program.

Rye's dental health program is managed by a dental hygiene teacher who has full faculty status. She is assisted by a practicing dentist.

All elementary school classes are visited periodically, teeth are checked and referrals are made to family dentists.

Educational programs are also being planned, revolving around such topics as nutrition, the importance of regular visits to dentists, etc.

As an extra dividend of the dental health program, for the past three years Rye dentists have donated their skills in fitting the school football teams with individual mouth guards. As a

result, Rye's footballers may be the only ones in the country with all of their own teeth.

### ▶ Refrigerator failure spotted by homemade warning

A homemade warning system has been installed in the refrigerator of Prospect High School, Arlington Heights, Ill. Faculty and student labor held the cost down to less than half a contractor's estimate.

The need for a warning system became apparent when, during a 10-day vacation, the school's refrigeration system broke down. As a result, a freezer-full of meats and poultry had to be thrown away.

With the new warning system, any time there is a power failure in the refrigeration system, an external light goes on and a bell sounds off. The

light and bell are clearly visible to cafeteria personnel during the day, and will attract the watchman after school hours.

The system was designed by Instructor John W. Griffith of the school's shop department and built by students under his direction.

### ▶ Pens, pencils help to gain state aid

Pens and pencils are being used in Lindenhurst, N. Y., to help boost state aid to the district.

Realizing that a great deal of aid, based on average daily attendance, is lost when students remain out of school unnecessarily, Principal Mason Papps of the William Rall school, has instituted an incentive plan to get his students to school more often.

Every student who has a perfect at-

## News of the teachers . . .

Here are some random items concerning teachers collected by SM's nationwide network of news gatherers.

**Kerchool! . . .** Put yourself in the position of Mathematics Teacher Doris Krueger of Cleveland. She spends the better part of her day writing problems out on a chalkboard. There's only one trouble with this scene. Teacher Krueger is allergic to chalk. Gesundheit!

**Here comes the class . . .** When Kindergarten Teacher Florence Ann Mostler of New Hyde Park, N. Y., was about to take the wedding vows, she explained to her students that she would be away from them for a few weeks on her honeymoon. As an afterthought she said the children might come to see her get married, if they wanted to. Fifty of them, bearing gifts of highly polished apples, showed up at the church. "I never expected them to take me so seriously," said the bride.

**Overheated . . .** Fourth-grade Teacher Mary Wright of Toledo, Ohio, is the hero of some 1,500 students. The school was evacuated when mysterious fumes were discovered in the building. They came from an overheated pan in which Miss Wright was boiling water with which to clean art equipment.

**Overpaid . . .** We doubt that Eighth-grade Teacher Gertrude Rosenblum of Hillsdale, N. J., is exactly a hero to fellow teachers, but the school board certainly appreciates her. Mrs. Rosenblum, who serves as part-time librarian, has asked the school board to deduct \$300 from her annual salary. She was paid this extra amount for her work in the library but since her class has been forced to use the library as its classroom, she has decided that there isn't enough extra time involved to justify the extra pay.

tendance record over a 10-week period, is awarded a pencil imprinted with the school's name. A repeater—a student who runs up a second consecutive string of 10 weeks—gets a ball point pen, also with the school's name.

Although the incentive may seem small to adults, it is apparently quite attractive to the students. Principal Papps reports a considerable improvement in attendance during the first 10-week period, with 261 of the 680 enrolled students compiling perfect records.

Funds for the pens and pencils are being taken from the student body fund, which is earned through the sale of pupils' photographs each year.

### Teachers can be compelled to attend state meetings

Teachers in South Dakota must attend conventions of their state education associations when told to by their school boards, according to Parnell Donohue, attorney general of South Dakota.

If the teacher refuses to go, he said, she may lose a day's pay.

### Outside speakers can aid guidance program

Outside speakers can be an important part of a high school guidance program, according to Charles A. Sukman, director of guidance at Jonas E. Salk High School, Levittown, N. Y.

The Salk guidance department works to identify student job interests and capabilities during their freshman year. Literature, films and conferences are then utilized to guide each student into career decisions most closely allied to

interest patterns they have expressed.

As a major part of this guidance program, the school has turned to outside speakers representing various fields of work. Industrial and governmental organizations, as well as parents of students in the school, are prime sources for speakers.

Groups of no more than 60 or 70 ninth-grade students, who have expressed an interest in the occupation under discussion, are brought together to hear each speaker. A long question-and-answer period is provided at the end of each session.

Salk students this year have heard

discussions of such occupations as nursing, engineering, teaching, personnel management, food merchandising, law, beauty culture, politics, science, auto mechanics, and state and federal government positions, all presented by people working in the specific areas.

In addition to the obvious advantages of having experts describe their occupations to interested students, the Salk school has gotten a bonus. Because the speakers are members of the larger community, newspaper coverage and other resultant publicity have focused attention on the guidance of the school, its goals and accomplishments.



**Speaker John Hoban, a civil engineer, answers additional questions of two ninth-graders.**

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## Teacher utilization

continued from page 61

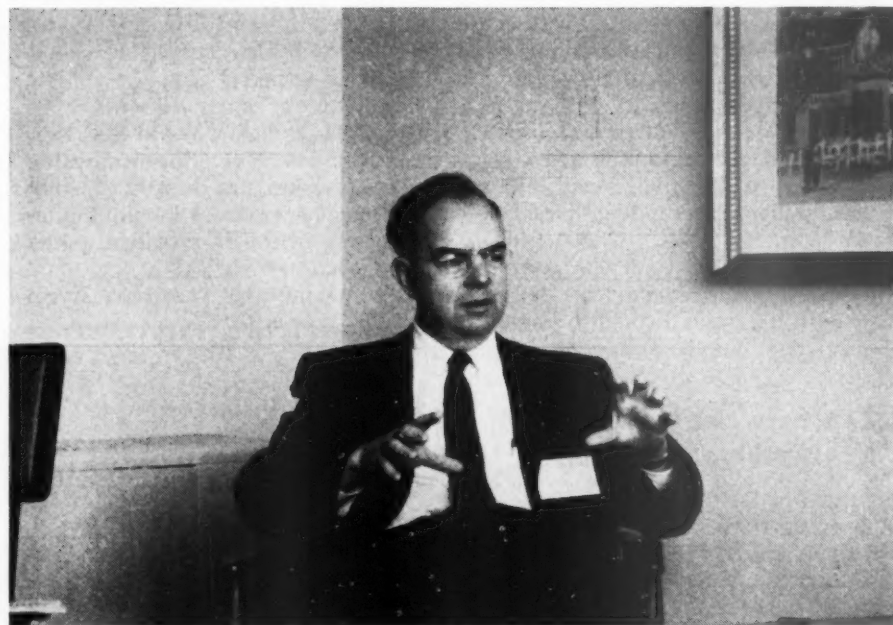
show a film to 25 youngsters? Why should you make a demonstration five times a day to five classes of 25? There are many things being done in schools today that can be done just as effectively with large groups. We think they can be done *more* effectively, too, because teachers, spared this unnecessary repetition, will have time to prepare better instructional materials. So, we're saying, in the first place, that we ought to ferret out those things that can be done with large groups. We don't think there is any magic in the large group. But you can save teachers time and energy.

**Q.** Many people in education challenge your right to say that large-group instruction would work. They want evidence.

**TRUMP:** You know, hundreds of tests have been run on this question, and the results always seem to come out the same way. This bothers some people. It actually doesn't seem to matter *how* you teach some things. If you analyze the results in terms of pupil learning, on the basis of standardized tests, you find the difference in those taking large-group instruction, and in controlled groups, are "statistically not significant." This phrase occurs over and over again. It occurs in the TV experiments, it occurs in class size experiments, and in many others. But that's not all. We think there are even more important values that can't be measured conventionally. For example, there are some outstanding teachers in every school. We should use these teachers for large-group presentations because they are best equipped to motivate students, they know how to explain things. You've got to get maximum use of the very best teachers. But they can't physically give lectures to three or more small groups. So you put them before a single large one. And you give them extra time during which to prepare better presentations.

**Q.** What about the loss of personal contact in this situation? Aren't children going to have their inter-personal contact with mediocrity, and not with these truly gifted teachers?

**TRUMP:** They'll have some contact with the lecturer. But the discussion



leader won't be any less a teacher than the one addressing large groups. He will just be *different*. In a discussion situation, the teacher should not be the person standing up in front asking questions. The students should carry the load. This is one of our greatest problems. In classes of 15, the teachers, if they're not worked with quite a bit, tend to teach the class the same as they do a class of 25—or indeed as they would a class of 100. This is a real problem.

**Q.** Then to realize your plan it would require a tremendous in-service training program within a school?

**TRUMP:** Absolutely.

**Q.** Could you cite some examples of how the discussion group teacher would perform differently than she now does in a typical class of 30?

**TRUMP:** We bring this group of 15 students together to talk about things they have been studying themselves, as individuals, or that they have heard presented in large groups. We want them to contribute any information or ideas that they have. They're sitting around a table, or in a circle, in a small group, and they're talking. One of the teacher's biggest problems is to keep quiet and let them talk. On the other hand, if some youngster makes a mis-statement, an error of fact, then the teacher comes in and says: "Look, John, you're wrong on that." She either says what is right or tells

John to check his facts and report back later. This is one role . . . correcting errors.

Another role is "pointing up" discussions. Youngsters are immature. They'll get off the subject and the teacher has to come in and say: "Here's an issue. Here's something I think we ought to focus on for awhile." In other words, the teacher sharpens the discussion.

Another role of the teacher is as an observer. For instance, if she observes that three or four students are monopolizing the discussion, she might say: "Look, we haven't heard from Bill or Mary. I wonder what they think about this." Now remember, I'm not talking about anything strange, or new, or different. These are techniques of the group process—helping youngsters pit mind against mind. This has always been the teacher's role. But it is quite different from the role that the teacher so often plays, standing up in front of the room, firing questions and getting answers and, in effect, making tape recorders out of the students.

**Q** You have been accused of being very arbitrary in what you have selected as the number of students compatible with large-group and small-



can improve the quality of education in any school."

**group sessions. For example, you say that a class of 25 to 35 is too large for successful discussion. How do you know that?**

TRUMP: There has been a good deal of experience in the group dynamics movement, evidence that's been building up for 15 years or more. If you want real involvement—if *all the people* are going to get a chance to talk frequently and to get into the discussion—12 or 15 seems to be the maximum. It has been said, and I think truthfully, that in the average class of 25 or 30, there are about seven people who really do most of the talking. I don't think we want the other 20 just sitting there quietly.

**Q. If there is any single area in which your report has been most attacked by school administrators, it is the idea of giving the child 40% of his time for individual study. As you said earlier, the American ideal is to educate everyone. What are we going to do with kids who can't study by themselves for 40% of the time?**

TRUMP: What do we do with them now? Typically, in one period out of five or six, we shepherd them into a study hall where they don't have any help from the teacher, anyway. She is there primarily as a policeman. They have no materials with which to work beyond textbooks. If they need to discuss something, they can't because it would disturb the rest of the class. Maybe the student would rather be in a shop or laboratory, or maybe he would like to be in a study carrel all by himself where he could do some writing, where he would have his reference books at hand. In other words, we already are forcing students into independent study, but the situation is not very conducive to it. But that's only part of it.

I think that if we work with these youngsters, and figure out what is best for them in terms of independent study, and assign them to that locale, whether it be a shop, a homemaking area, the library or an individual carrel—in or outside the school—then they will get something out of their independent study.

**Q. Could they be assigned to language laboratories?**

TRUMP: Of course.

**Q. Teaching machines?**

TRUMP: Absolutely. All these things. The administration must know where these kids are. No one has ever said that they are just turned loose. This is not a child-centered school or anything of that nature—no one has ever said this. But, instead of herding them into a study hall 50 minutes a day, we would put them in a place where they might benefit. I've asked teacher after teacher if this is good only for the gifted. They answer "no." Just last week a science teacher said: "This is just as good for the lowest ability students we have. If anything, they need this more than the high ability students. To be able to work where they are interested—that would make sense." That, it seems to me, is the key.

**Q Could a school start out with just one or two elements of your school of the future, or is it necessary to plunge into new organization, new classes, new curriculum, all at once?**

TRUMP: You can only get partial benefit from fragmented approaches because, if you have large groups without the small groups and independent study, you're not doing the job. Or, if you try large groups without changing the teacher load, the teachers don't have time to prepare.

**Q. Let's say a school wanted to introduce large-group instruction in one subject because it had one really superb teacher available. The administrator might reason that all of the children would be exposed to this one man in one subject, at least. Would there be any advantage that would accrue if the school could do only that?**

TRUMP: If we assume that the man who would be addressing the large group would have some extra time for preparation, I think any change of that type would make for some benefit. But I don't think the poten-

tial is as great. The whole concept of the secondary school, its facilities, its purposes, its methods, its staff, its curriculum, its finances, must undergo basic, carefully considered changes. The adoption of even one of the suggestions proposed can improve the quality of education in any school. But the gains will be much more significant when a number of changes are undertaken as parts of a coordinated program.

**Q. You say that fragmentation is not so good as doing the whole job. Do you mean the fragmentation of using large groups, but not small groups, or do you mean working in only one subject?**

TRUMP: I mean both of these things. I also mean doing only a part of the staffing patterns that are recommended. I don't believe we will have any great improvement in the quality of teaching or the quality of education until we differentiate among the instructional roles in the school. Teachers must have clerical assistants. They must have general aides for some of the things they do. They must have instruction assistants. I don't think you can do any one of these things and get the benefits without going pretty much the whole way. You'll get some, but not the maximum.

**Q. Could a school, for example, profitably introduce some changes in its whole English department?**

TRUMP: That is fragmentation, but I think this is the way you have to start. I'm simply saying that you are not going to get maximum benefits until you go farther. Of course, you have to start in a simple way. You can even start in a part of a department.

**Q Let's take a specific situation. A superintendent has read your book, discussed it, and decided he would like to try implementing some of the things that have been outlined. Where does he start?**

TRUMP: Suppose you have two sections of English. The first thing you might do is to schedule these sec-

**"All we're saying is that we ought to give our professional teachers**



tions during the same period so the two teachers can operate as a team instead of working in solitary confinement. Then, if they want to teach something to the two sections simultaneously, they can do it. We call this back-to-back scheduling. This is one thing any school can do. Certainly another thing that would be relatively simple is to provide some clerical help. You can do this without changing anything else in the school.

**Q.** Did you pick English for any reason, or could this be any subject?

**TRUMP:** It would be just as appropriate for any subject in the school.

**Q.** What would you look for in a teacher? A superintendent has a traditional school with traditional teachers. What might he look for to indicate that any teacher could handle this new type of program?

**TRUMP:** For what job? I believe in differentiated teaching assignments. I would look for a teacher who is willing and effective in presentation, at explaining things, to handle the large-group sessions. I would want one who is not appalled at the idea of explaining something to 100

youngsters. Believe me, this is *not* an overwhelming task. On the other hand, there are teachers who would be most effective in small groups. We need both kinds. They would both be members of a teaching team, along with instructional assistants, clerks, and general aides.

**Q.** You have introduced a number of terms here that are not frequently found in most schools. For example, instructional assistants. Who are these people?

**TRUMP:** These are persons who are competent in an area of knowledge but do not necessarily possess a teaching certificate. They are people who might be in charge of a laboratory. Such people would realize the dangers that exist in a science laboratory although they might not be able to teach science. An instructional aide might help out in an industrial arts shop. He might grade some English papers.

**Q.** How are you going to get these people past the certification requirements? Aren't many state education departments going to say, "you can't use them?"

**TRUMP:** Some of these man-made

standards will have to be changed. And I'm very encouraged by the willingness on the part of the state departments to experiment. They have taken the point of view that maybe our standards do need to be re-examined. There must continue to be high professional standards for the employment of teachers in schools. We're going to employ professional teachers, highly qualified to do some things, but we're also going to make it possible for other kinds of persons to do other things. For instance, I don't think you need to know a lot of psychology and method-of-teaching to grade an English theme or to supervise students in a laboratory, so long as you're not organizing the totality of instruction in science. But you can go into the lab and keep the kids from blowing each other up. Often you can answer many of their simple questions.

**Q.** Would you offer these instructional aides any in-service training?

**TRUMP:** Absolutely. I would select them just as carefully as I select the teaching staff. I'd select them to do a specific job just as I would select a clerk to do a clerical job. No one has ever assumed that we wouldn't be as careful in hiring these people. But we must hire *different kinds* of people, instead of saying, "A certified teacher must do everything in a school." I think the person who is in charge of the team, if you want to call it that, needs to know all of the psychology and the teaching methods that it is possible for a person to know. This is the sign of the real professional. But the trouble is, you see, we inflict so many other things on them that they can't be professionals.

**Q** You have mentioned this word "team" again. Just what do you mean by a team? How does it operate? What about the potential strain between these people?

**TRUMP:** The teaching team idea simply means that several teachers, with their assistants and equipment, combine forces to instruct a given



**a chance to perform as professionals."**

number of students. The number of students depends on the size of the team. For example, three teachers with assistants might work with the equivalent of three or four ordinary classes of students, grouping and regrouping the students from time to time in accordance with the purposes of instruction.

The teaching team may be drawn from one subject or grade area or from many. It is probably best to organize a variety of teams, but not all teachers should be assigned to them. That would violate our concept of recognizing individual differences among teachers.

Teaching teams provide optimum use of the specialized skills of each team member. Teachers benefit from working together. This breaks the isolation of the teacher in the self-contained classroom. And students receive increased intellectual stimulation by contacts with several minds and personalities instead of only one.

Teachers needn't learn to work together on an everyday basis. Those who do enjoy the isolation of their classrooms should not be forced at once into team teaching. But the opportunity to do so should not be denied them.

**Q.** Is there a greater value to a school in the teacher who can make a large-group presentation as opposed to the one who would have to work with smaller groups?

**TRUMP:** No, I don't think so. This is a problem we actually need more experience with. I know what's in back of your question: "Are you going to pay these people more than other teachers?" Actually, at Newton, Mass., as you may know, they have paid more to their teacher-lecturers, as they call them. I think this may be a questionable practice. On the other hand, I think the time may come when we will identify different teaching roles. For instance, there may be a difference between the career professional teacher, who is in this business as a profession, and the housewife, who is teaching to supplement the family income and who really doesn't have the time or energy to do the things which a professional person should do.

**Q** **Most districts have good, perfectly sound buildings. They can't be torn down. But they were built for a traditional curriculum, with all classrooms the same size and no provision for large or small group gatherings. How can your program be introduced in these buildings?**

**TRUMP:** In the first place, there are large spaces in any school. There are study halls, a cafeteria, an auditorium. You can find some space. Another thing you can do—and some schools have—is to put two or three rooms together via closed-circuit television. Small spaces can be obtained by putting up room dividers. True, these are makeshift arrangements, but they can be done. Now, if you are constructing a new building for this program, it would have a different design. I think then we would plan special places for large and small-group instruction and for individual study.

**Q.** Are there any places where an administrator could go to see your program in action?

**TRUMP:** No. We can't send him to any pilot school where all of these things are in operation at the present time. Unfortunately, from the standpoint of demonstration, all of our studies, up to now, are fragmented. A school will have some large-group instruction in some departments or will have some small-group instruction in some departments, or they'll try some changes in staffing patterns in a sort of preliminary way. But there are some schools that are beginning to think seriously about going much further. I'm working, at the present time, with a school district that will soon have all of the subject areas organized in terms of large groups, small groups and independent study. They will not be in exactly the same percentages as suggested in "Images of the Future." But, there's nothing sacred about those percentages. We've never said there was.

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perintendent: "Here's a place you can go. You see what it costs. You can see how it's working." Until then, the only thing we can suggest would be that anybody interested in learning more about programs utilizing these methods go to the January 1958, 1959 and 1960 issues of the *NASSP Bulletin* where the results of various kinds of studies have been published.

**Q.** From this material, then, a superintendent could get a pretty good idea of how the programs you envisage would work out in practice?  
**TRUMP:** Yes. And they must bear this in mind: We don't believe in a child-centered school. We believe that the role of the teacher is more important than the present school

#### TEACHER REACTION

Just a few hours after conducting this interview, editors of *School Management* talked to Richard D. Batchelder, president of the NEA's Department of Classroom Teachers and President-elect Buena Stolberg, to learn what teachers think of the Trump proposals.

Batchelder is a member of the Newton, Mass., school system where many aspects of the Trump program are being tried out. Mrs. Stolberg does her teaching in Webster Groves, Mo. Their reactions will be reported next month.

has ever made it. All we're saying is that we ought to find out the special talents of the youngsters and we ought to give our professional teachers a chance to perform as professionals. If we're going to keep ahead of the Russians, and I hate this comparison, we're going to do it only if we challenge the creativity and ability of the totality of our population. This, I think, is really the educational revolution of the twentieth century that we're trying to undertake. These kids are not being challenged in the present teaching pattern. And we're not getting enough mileage from the too few teachers we have.

**End**



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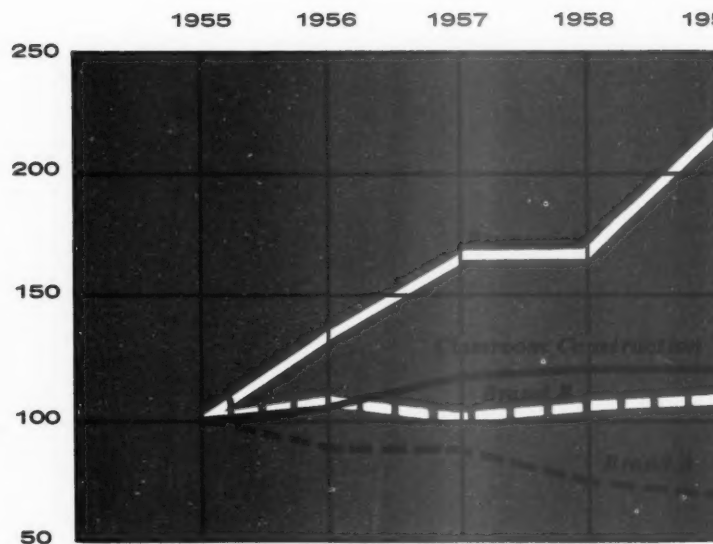
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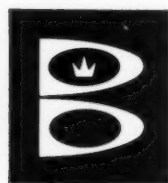
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## Air conditioning

*continued from page 66*

festly silly. The way to make sure of its not happening is to use a system based on adding summer cooling to a proven system of classroom wintertime ventilation, rather than beginning the other way 'round.

This approach also makes it easy to provide now for air conditioning later on, in new schools. In the case of the air-conditioning unit ventilator, for example, all that is needed is to provide suitable insulated piping, space for added equipment in the heater room, and some means for disposing of the moisture wrung out of the air. These are not expensive provisions.

This point, along with many of the other points in this article, underscores the responsibility of school management with respect to school air conditioning—a responsibility which has already begun. If the facts and arguments which have been cited here are sound, it is high time for school officials to begin to examine the basic question of school plant investment and school plant utilization which air conditioning involves. School boards, as policy-making bodies, have the duty to decide whether or not immediate air conditioning of new school facilities—as at Alton, Ill.—offers a path to more efficient utilization of educational space, or whether simplification of school design—as in Clark County, Nev.—will more than make up for extra air-conditioning costs. And even if the answer in each case is a considered, "Let's wait and see how the thing develops elsewhere," there is still the matter of whether to provide for future air conditioning in new school buildings. It will not provide the same economy in planning and construction, but it's the minimum step to be taken.

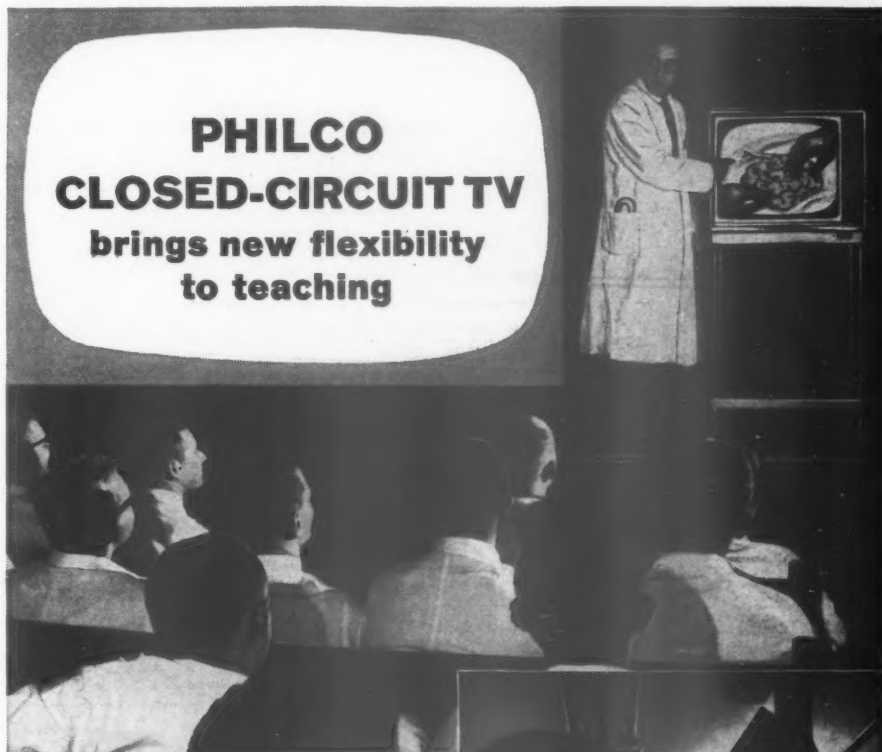
Whatever path seems indicated for your school district, there is encouraging evidence that once the choice has been made, the problem of selling additional expenditures for present or future air conditioning to the taxpayer will be a good deal easier than has hitherto been anticipated. Once air-conditioned space has been made available, the chances are excellent that it will be used to capacity in hot weather, and can be pointed to as evidence of new ef-

iciency much more readily than it can be tagged an extravagance.

Essentially, the school air-conditioning question is one of economics, and it should be approached with all of the dollars-and-cents factors clearly in mind. Nothing has been said here about the cost of operation of school air conditioning, first, because it is likely to vary a good deal more than the cost of providing air-conditioning equipment, and second, because there is little reliable data on this yet available for schools. In mid-Illinois, it has

been estimated at a dollar a day per classroom, or about the same as the heating cost in very cold weather. But whether it is slightly more or slightly less is not likely to be decisive. Rather, as the key to summertime schooling, air conditioning, by opening the door to full-time operation of the educational system, may turn out to be one of the most important things which has happened to schools and schooling in recent years. On this basis, it warrants the careful scrutiny of everyone interested in educational progress. **End**

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## Public opinion

continued from page 68

upon the personal traits of students; the nature of the subject matter taught in schools; and the individual attention paid to students by school staff members.

Some kinds of responses could be associated with particular groups. Board members, for example, generally equated quality with the professional management of the school. They tended, too, to make their judgments in traditional and con-

servative terms. To only a slight degree, they were concerned with discipline and purely intellectual achievements.

### When nobody's listening

But even more interesting to a district's public relations officer are the study's findings regarding what the public is *not* concerned with in judging school quality. These are areas that deserve particular study, especially if your own district's public relations efforts have been faithfully emphasizing them in an all-

inclusive kind of informational approach.

1. Only slight concern was expressed about college preparation—a significant fact since the study was conducted in communities where 60% of high school graduates go on to college! Apparently, little regard is given to official accreditation as a mark of quality or, for that matter, to school reputation, prestige, or general social rating.

2. Infrequent mention was made of homework policies.

3. Little preference was expressed for private versus public schools.

4. Promotion policies and grading were barely touched upon.

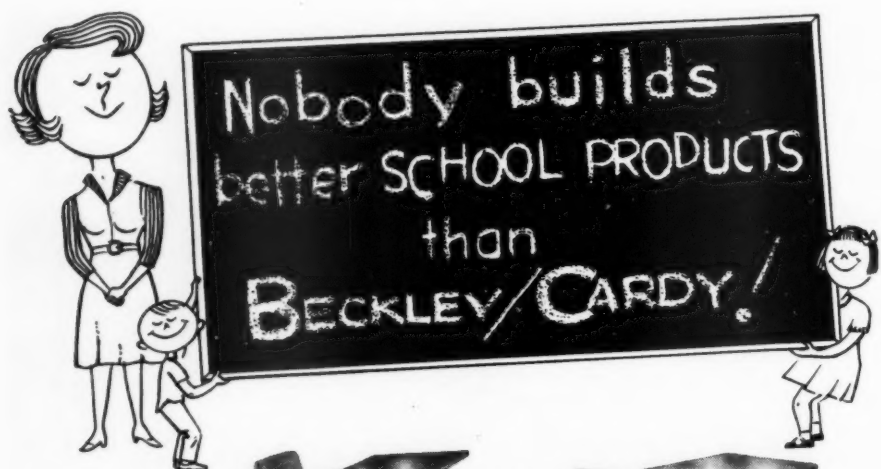
5. Concern for the education of the exceptionally talented was rarely cited.

It is interesting to note that the "cultural" electives—music, art, dramatics, etc.—so much in evidence in our schools during the past few decades, seemingly rate very low as public-persuaders. Perhaps this is something that more schoolmen should be aware of.

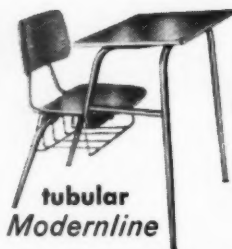
There is one local school board which has long turned a deaf ear to teachers' pleas that the school eliminate musical instrument lessons from the daily schedule. They find it difficult to conduct classes with students constantly moving in and out of the room on the way to musical instrument practice on six different instruments. Yet the school board thinks the music training program is an invaluable part of the public relations program!

What are the facts? According to Vincent's study, cultural electives, though recognized by the community, do little to affect the public's attitude toward how *good* its schools are. So the frustration and discontent felt by the teachers in the illustration above becomes, not a sacrifice to school-community rapport, but merely dissatisfaction over still another teacher burden.

This example of how misinformation about public attitudes can backfire typifies the need for accurate knowledge of what your community really thinks about your schools. Once you know its views you can move your public relations program into high gear and make it work for you. Until you do you'll only be operating by guess work and, as often as not, your efforts may do more harm than good. **End**



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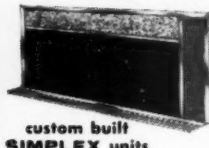
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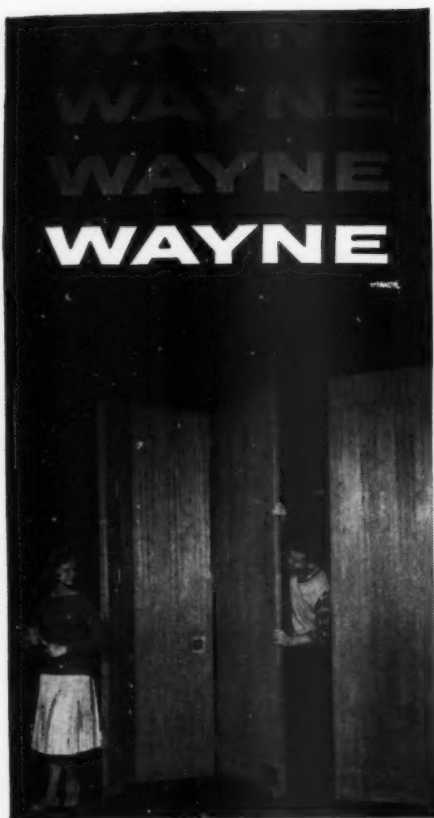
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## Merit pay works *continued from page 72*

position analysis. This analysis lists the 10 major responsibilities of the teacher's job, with a written description of the duties required to discharge these responsibilities plus a standard of performance for each responsibility.

The merit rating form is keyed to the position analysis in that it uses the 10 major responsibilities as a basis of the rating. Each of the responsibilities is weighted (*see box, page 72*). Highest weightings are for knowledge of subject matter, pupil-teacher relations, and techniques of instruction.

For each responsibility, a teacher's performance can be rated from a maximum of 10 points (for outstanding performance) to a minimum of two points (for miserable failure). The best score that a teacher can get is 200 and the lowest is 40. Thus, each teacher is compared against a master standard equally applicable to all teaching positions. There is no attempt made to measure one teacher against another, nor to evaluate one position against another. All are evaluated by their performance compared with the 10 major responsibilities in the position analysis.

### Who does the rating?

Each teacher is rated once a year by several raters, each of whom observes the teacher in action regularly during the year.

The superintendent rates every teacher in the system, basing his ratings on at least 2.5 hours of classroom observation every day (divided, of course, among the 170 teachers on the faculty).

The principal rates each teacher under him, and, where applicable, the teacher is also rated by the assistant principal and the department head. Thus there are at least two raters (superintendent and principal) for every teacher, and at the high school level there can be a total of four raters (adding the assistant principal as well as the department head).

The effect of bias, prejudice, or favoritism is minimized through the use of several raters and also through the use of a reconciliation process in which significant differences in ratings are discussed between the raters

to insure greater accuracy and fairness. In addition, the raters are constantly retrained and guided in their appraisals. Despite these precautions, however, the system depends on the integrity and objectivity of the raters. Sound rating is making merit pay work at Summit now. With a new superintendent, the results might not be the same.

### Awarding merit pay

Individual teacher pay at Summit is determined by two elements: 1) the basic pattern, and 2) merit increments. The basic pattern provides for salary increases based on length of service regardless of degrees earned.

The merit increments are based on the annual merit rating. A teacher who scores 120 to 160 is rated average or satisfactory and is entitled to stay on the basic pattern. Average or satisfactory teachers are not entitled to merit increases.

Teachers who score less than 120 are rated below average and could conceivably, if blatantly poor, be denied the normal length-of-service increment earned under the basic pattern. Thus the Summit merit system can, under certain circumstances, withhold regular increases as well as award special ones.

A teacher who scores above 160 is performing meritoriously and becomes eligible for a merit increase in addition to any increase earned under the basic pattern. A meritorious teacher who performs consistently at that level may receive a merit increment every three years (not more frequently, even though ratings are made yearly).

A teacher who performs erratically over the years, could be, at different times, on the basic pattern, or at varying levels above the pattern (*see charts, page 73*).

A satisfactory teacher (not on merit) can receive pattern increases up to the pattern maximum. A meritorious teacher who has reached the terminal point of the basic pattern becomes eligible for the rating of master career teacher. Such a teacher receives an increment equal to 2.5 times the normal pattern increment—and can receive such an increment every five years.

The normal merit increment is

# FLOATS- OFF



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equal to twice the pattern increment. The pattern increment depends on the pay scales of selected comparative New Jersey communities. (Last year, for example, the basic pattern increment at Summit was \$220. Teachers qualifying for merit increases received \$440. Master career teachers who qualified for a merit increment received a \$550 increase.)

About 40% of the teachers in Summit now receive merit pay, and there is no limit on the number of

teachers who are capable of achieving meritorious status and meritorious pay.

#### How teachers feel

In the fall of 1959, after two years of operation, the Summit Teachers Association conducted an anonymous poll of all teachers on their reaction to the merit pay plan. Sixty-nine percent of the teachers in the system stated that they were "in favor of the present Summit merit system." Of these, 35% were

not receiving merit pay at the time. The 31% who disapproved of the present Summit merit system were asked to check any of six reasons for their objections. Every one of that group checked "difference of interpretation by raters," and two-thirds commented that "ratings are not objective enough."

More important, 90% of those opposed to the merit rating system said that it "tends to break down teacher morale." This, however, is partly counterbalanced by the fact that a large group of those who favored the merit rating plan stated that it "boosts morale." The majority favoring the merit pay plan see these advantages in it:

1. The plan really provides incentive.
2. It recognizes, much more often than it fails to recognize, exceptional teaching performance.
3. It provides a realistic approach to the salary problem which can no longer be handled by simple across-the-board increases.

The minority opposing the merit pay plan gave these as their main reasons:

1. The raters don't interpret the same observations in the same way.
2. The raters don't do enough observing.
3. Raters should receive more training in the art of observation.

#### Basis of support

We believe that the general success of Summit's merit pay plan lies in its inherent fairness, in the fairness and quality of our superintendent, and in the fact that teachers helped to develop the plan.

This latter could not have been accomplished without outside consulting assistance, we found, since teachers and administrators tend to be too close to their work.

Merit pay, in our opinion, is going to be demanded by the taxpayers as teacher salaries get higher and higher. We feel the merit principle will have to be adopted particularly by those districts that pay above the average salary scale now. But any district that wants to adopt a merit pay system—and wants the teachers to support it—must keep the following in mind:

1. Any school board must accept the fact that a workable merit rating

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and pay plan will cost more than an automatic schedule. It will *never* save money.

2. There must be, as an underlying foundation, a base schedule for the substantially good teacher which is competitive with other, non-merit paying communities.

3. The school system must be free of political control, influence and lack of integrity at the administrative level.

4. Judgments involved in rating must have strong controls to minimize subjectivity on the part of those rating teacher performance.

5. Sufficient time must be available or made available to administrative raters for supervision and observation.

6. Teachers must take part in planning and working out the details of the rating system. A board cannot impose a plan from above or use anyone else's pre-tailored plan. Our experience leads us to support the use of outside consultants in the development of the plan.

7. The plan must be acceptable to the great majority of teachers.

8. Trained professional people (administrators) must serve as raters and they must have been trained in the rating process.

9. Rating of performance can never list precisely the relative position of one teacher to another. Basically, it serves to identify those who are outstanding and can help those who are not outstanding to improve their performance.

10. There must be no limit imposed by the board or the administration on the number of teachers who can achieve meritorious status and pay. If initial selection is outstanding, and if counseling for improvement of performance is really effective, it is conceivable that *all* teachers in a system might be on "merit pay" status.

11. A teacher must be given the opportunity to become a merit teacher at any time during his career.

12. Any merit rating and pay plan must be under constant study.

13. The teachers must have confidence in the sincerity, integrity and competence of the administrative raters and in the board of education.

If these rules are followed, merit pay can work in any district as well as it is working here in Summit. **End**

# Once and for all...

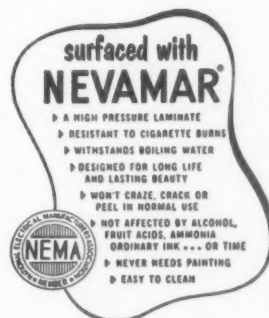
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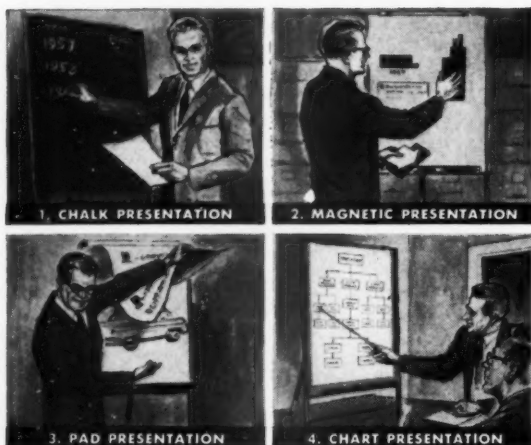
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## Yours for the asking

*continued from page 28*

tem and gives detailed information on how to set one up. It also discusses the three principal ways to photograph records and explains the major methods of filing and indexing now in use. Other graphically treated subjects include visual and mechanical indexing aids, record locating and cards and jackets for "unitizing" microfilm.

For a free copy of this booklet, circle number 888 on the Reader Service Card.

**Suspended ceilings of metal lath.** Special emphasis on lighting details is given in the Metal Lath Mfr. Assoc.'s two-page supplement to a previous bulletin on suspended ceilings. Included is data relating to light troughs in a suspended metal lath and plaster ceiling, light troughs attached to a wall, reflected ceiling plans with troffer openings and a typical section through a light troffer in membrane fireproofing.

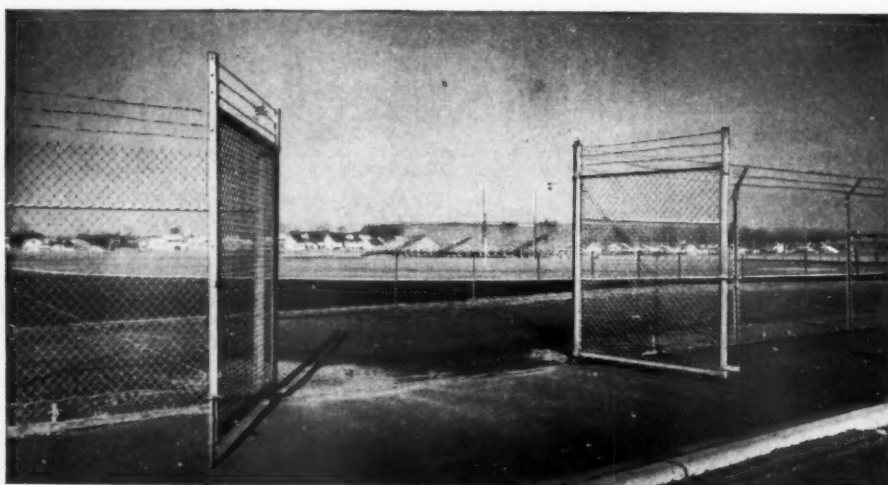
For a free copy of this supplement, circle number 883 on the Reader Service Card.

**Rolling doors and partitions.** Complete information, architectural specifications and detail drawings covering all types of standard and special situations are covered in Cookson Co.'s 20-page, two-color catalog No. 6001, devoted to rolling doors and partitions. Included are a series of comprehensive charts and design details to simplify selection of proper gauge and type of slats, guide type, power units and other components. Blueprints show all necessary dimensions and Underwriters' Laboratory label requirements are fully outlined.

For a free copy of this catalog, circle number 833 on the Reader Service Card.

**Steel furniture guide.** What to look for in the purchase of top quality steel office furniture is the subject of an eight-page booklet available from Benson Mfg. Co. Data and full-page drawings combine to provide the buyer with guides to desk and file testing procedures, standards for exterior finishes, requirements for hardware and trim. Drawer slides, lock mechanisms and many other construction details as well as recommended gauges for exterior surfaces and unexposed parts are discussed.

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• Sold direct from factory branches in principal cities.

(Circle number 712 for more information)

*News from the business firms serving your schools*

### Colorful "riding" animals

Appealing, imaginative fiberglass birds and animals for youngsters to ride upon are available exclusively from Game-time, Inc. Designed for children from two to ten, the new



Saddle-Mates have special epoxy resin coatings and withstand weather, hard use and long wear indefinitely. Mounted on sturdy steel springs with steel mounting plates, models are available either with portable, no-tip bases, or without base for permanent installation in cement. Springs provide a delightful rocking motion, yet avoid pinching curious fingers. The pedestal models, complete with base, weigh 125 lbs. and are offered in the following colors—horse: white, black; donkey: brown; camel: blue, yellow; swan: white, yellow; and duck: white, yellow.

For more information, circle number 858 on the Reader Service Card.

### Concealed perimeter heating

Abundant storage space and concealed electric perimeter heating are provided by the Chromalox heating and cabinet units introduced by Edwin L. Wiegand Co. Cabinets and baseboard may be used as an independent room heater if desired. Cabinet bases and top grilles are perforated to allow air circulation to the baseboard heaters. Cool air enters through the cabinet base, is heated and rises upward through the top grille—counteracting down drafts. The 16-gauge steel cabinets, with adjustable shelves, are factory-finished in baked coral-tan enamel. They are available in two-, three- and four-foot lengths, are 26½

inches high, 13¼ inches deep and may be joined together to form longer lengths for full wall coverage. Sliding doors are also available in matching colors and removable end panels for the cabinets can be ordered as well.

For more information, circle number 878 on the Reader Service Card.

### Talking records

A library of children's literary classics is available from Caedmon Records. The spoken recordings are read by professionals such as Boris Karloff, Judith Anderson, Michael Redgrave, Basil Rathbone, Joseph Schildkraut, Cyril Ritchard and others. Some of the titles offered by the record company include: "Mother Goose," "A Child's Garden of Verses," "Just So Stories," "Grimm's Fairy Tales," "Alice in Wonderland," "Nonsense Verse of Carroll and Lear," "Gulliver's Travels" and "Stories of Mark Twain."

For more information, circle number 875 on the Reader Service Card.

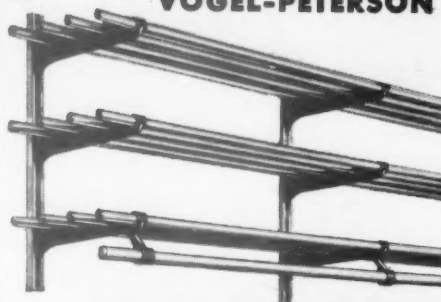
### Steel book cart

A mobile, double-sided book cart, containing 18 feet of book storage space in a cabinet just three feet wide and three feet high has been announced by Grade-Aid Corp. The unit is mounted on four heavy-duty casters to permit easy handling and is



110

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### CUSTOM-LINE Aluminum HAT and COAT RACKS

Tailored to fit any given open or closetted wall area. Smart in design and modern in "clear", "gold" deep etched anodized finishes and combinations. Quality built—closed-end aluminum tubing, rigidly held in cast aluminum brackets that are adjustable for height in dovetailed mounting extrusions. Brackets also adjustable to any desired centers.

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School District \_\_\_\_\_ No. pupils \_\_\_\_\_

Home address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Attach additional names to  
separate sheet



equipped with two welded steel shelves on each side of a center separator. Both sides of the cart extend above the top shelf to serve as "book ends." Colors: gray or tan enamel finish.

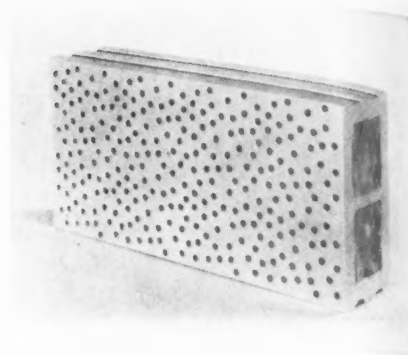
For more information, circle number 862 on the Reader Service Card.

■ ■ ■

#### Ceramic acoustical tile

A tile just introduced by Arketex Ceramic Corp. permits construction of load-bearing walls that incorporate

acoustical control. Combining the principle of a Helmholtz Resonator and cells filled with fiberglass, each glazed Soundbar unit offers high sound absorption and efficient sound insulation. Acoustical panels or random-acoustical applications may be achieved by using the new tile in combination with straight ceramic glazed structural tile. In a wide range of new colors and a distinctive texture, the new tile adds an attractive decorative touch to interior walls while providing high resistance to moisture, fire and abrasion, ease of cleaning and minimal maintenance,



thermal insulation value and a wide adaptability for unmatched acoustical control.

For more information, circle number 831 on the Reader Service Card.

■ ■ ■

#### Hot-water heating unit

A hot-water coil of copper and aluminum and automatic dampers for mixing heated, recirculated and ventilated air are featured in the hot-water heating unit recently introduced by Lennox Industries. It also contains a blower for the even distribution of air throughout the classroom by way of bookshelf or wall ducts. This unit, designated DVW2-1200, adds wet heat to the warm air heating system. A similar air processing device will soon be available for use with central heating systems using steam.

For more information, circle number 882 on Reader Service Card.

■ ■ ■

#### Faucet seat tap

Faucets and small valves with non-removable seats that become worn, pitted, grooved or corroded need not be discarded. A new faucet seat tap introduced by J. A. Sexauer Mfg. Co., Inc., can be used to tap such fixtures for the installation of one of the firm's removable seats which, it is



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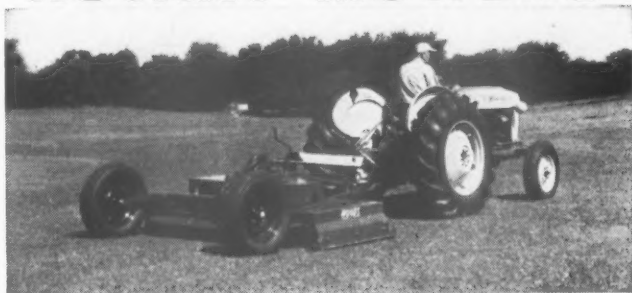


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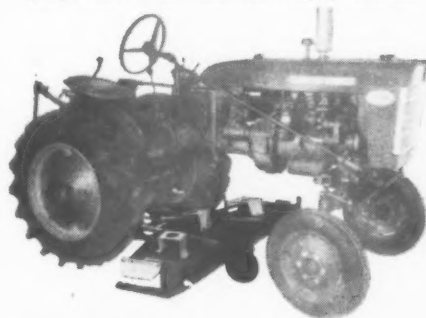
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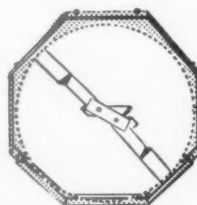
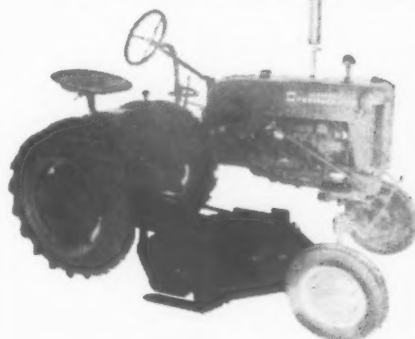
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Wood's Rotaries offer a choice of swath widths from 3 1/2' up to a giant 9 1/2' that cover 6 acres per hour. Not only is the job fast, it's smooth and even. The savings in reduced grounds maintenance cost soon pays for the machine many times.



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claimed, outlast the faucet. The entire operation takes but a few minutes. Available in five sizes, the removable seat taps can be used on hundreds of makes and types of faucets and small valves.

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### Combination shop machine

A combination belt and disc finishing machine, particularly suitable for school shops, has been introduced by

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The machine can handle all finishing operations on wood and plastic and is capable of grinding, surfacing or polishing steel components, die castings, aluminum, brass and copper parts and a variety of other materials. It can be used as well for sharpening tools. A specially designed idler drum guard facilitates hollow grinding of wood chisels, lathe chisels, carving tools and plane irons. There are no wheels to "dress" and quenching in water is not necessary.

Grinding with abrasive belts also

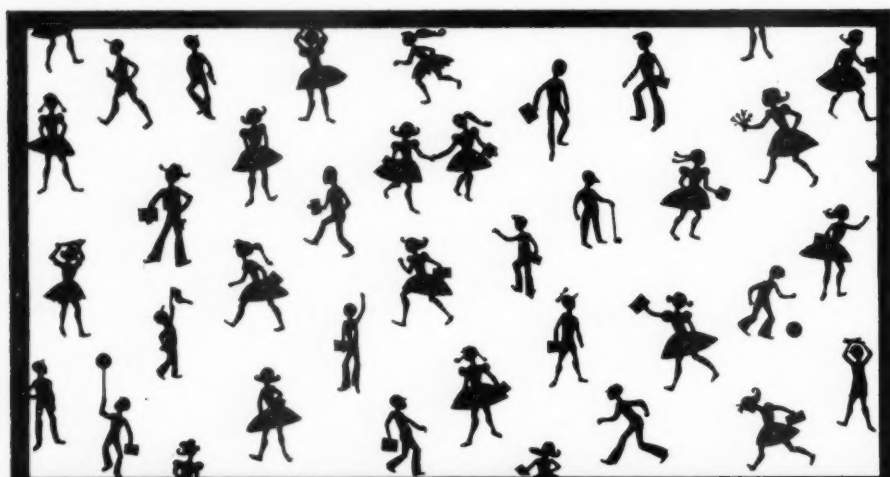
eliminates heat generation, preventing any loss of temper.

For more information, circle number 830 on the Reader Service Card.

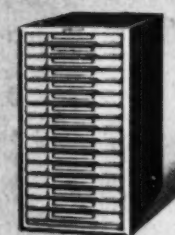


### Portable table-chairs unit

A table-and-chairs combination that is folding and portable, yet permits a person to walk to his seat free of obstructions, has been developed by Sico Mfg. Co., Inc. The all-in-one unit



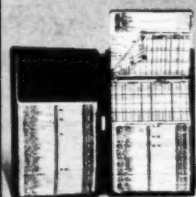
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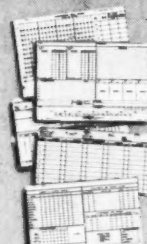
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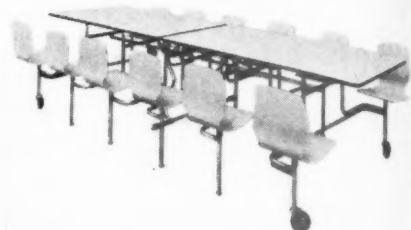
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provides users with comfort and convenience uncommon in table seating equipment, while retaining the advantages of fixed dimension seating. Flexibility is a feature of the new unit—the individually supported chairs can be swiveled 180 degrees, enabling users to face completely away from the table. When unoccupied, the chairs automatically return to normal position. Offered in contoured plywood or molded plastic, the chairs are anchored to the table by structural steel pedestals which are offset to eliminate straddling. Produced in 10-foot lengths, the unit will accommodate 12 persons. The table can be folded in the middle with little effort and it—together with the attached chairs—can be rolled to storage areas on four-inch rubber casters. Guaranteed for 10 years, the

(Circle number 705 for more information)





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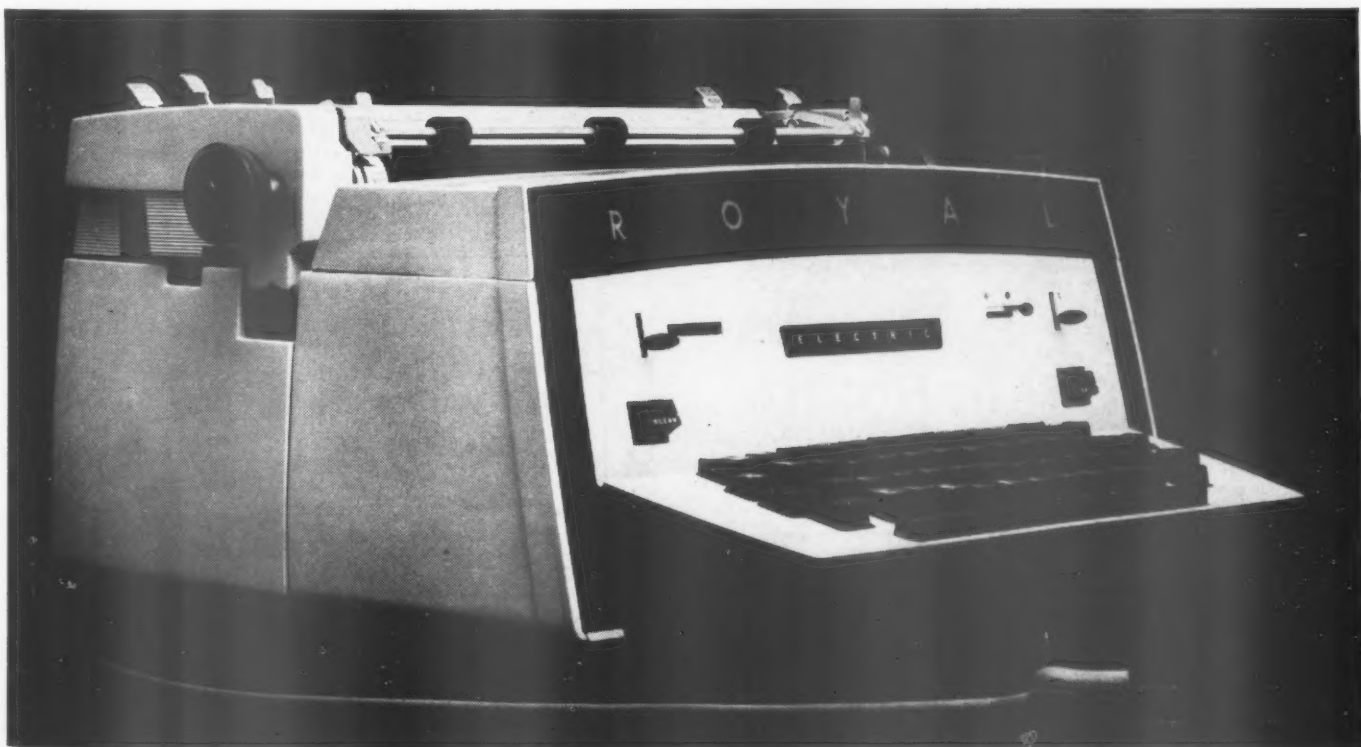
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And of course, the new Royal Electric has other famous Royal exclusives such as the Twin-Pak® ribbon changer, Magic® Margin and Touch Control®.

You just can't realize how great the new Royal Electric is until you try it. Contact your Royal representative today for a demonstration.

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THE NEW ROYAL ELECTRIC—FOR A MUCH BETTER CLASS OF TYPING  
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portable unit contains no latches, locks or levers in the folding mechanism.

For more information, circle number 880 on the Reader Service Card.

### Parking line marker

An inexpensive, do-it-yourself parking line marker that paints a line as fast as a person can walk is available from Wald Mfg. Co. The Little Stripe-R paints a standard four-inch line using any kind of traffic paint. It is sturdily built of steel and aluminum and features hard rubber wheels, removable brushes and a simple, non-clogging valve that can be easily cleaned.

For more information, circle number 894 on the Reader Service Card.

### Bantam bus

A new line of custom-designed bantam buses for transporting handicapped children to and from school was introduced recently by Wayne Bus Div., Divco-Wayne Corp. Built on a rugged truck chassis, the bantam is fitted with safety belts and "parachute harness" seats to insure the safety of



children in transit. An added feature is a telescoping, split ramp which permits wheelchair patients to be pushed up through a second door in the side of the bus. Clamps bolted into the wall of the vehicle hook into the wheelchairs, keeping them stationary while the bus is in motion.

For more information, circle number 856 on the Reader Service Card.

### Art reproductions

Appointed as exclusive school distributor for Great Art Prints by Abrams, Inc., the Society for Visual

Education, Inc., is making available a wide variety of titles and artists—both old and modern masters. Artists represented include Cezanne, Renoir, Lautrec, Braque, Corot, Courset, Hals, Vermeer Degas, Rembrandt, Van Gogh and many more. SVE also offers a library of art masterpieces on 2-inch by 2-inch color slides suitable for projection, though these are separate and distinct from its new art print service.

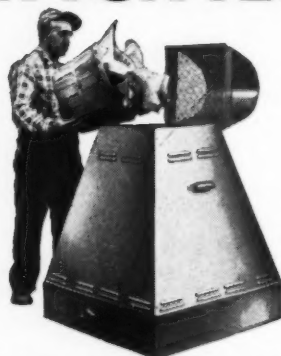
For more information, circle number 855 on the Reader Service Card.

### Refrigerated milk dispenser

An adjustable temperature control located on the side of the Norris N-10 super milk dispenser insures that the milk within is always kept at its most desirable serving temperature. The stainless steel dispenser, manufactured by Norris Dispensers, Inc., holds two five-gallon milk cans. It can stand on any flat surface or on special refrigerated cabinets available from the company. Also available is a smaller model dispenser holding one five-gallon milk can and a larger one holding three cans.

For more information, circle number 852 on the Reader Service Card.

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TRASH  
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Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminumized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only \$110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

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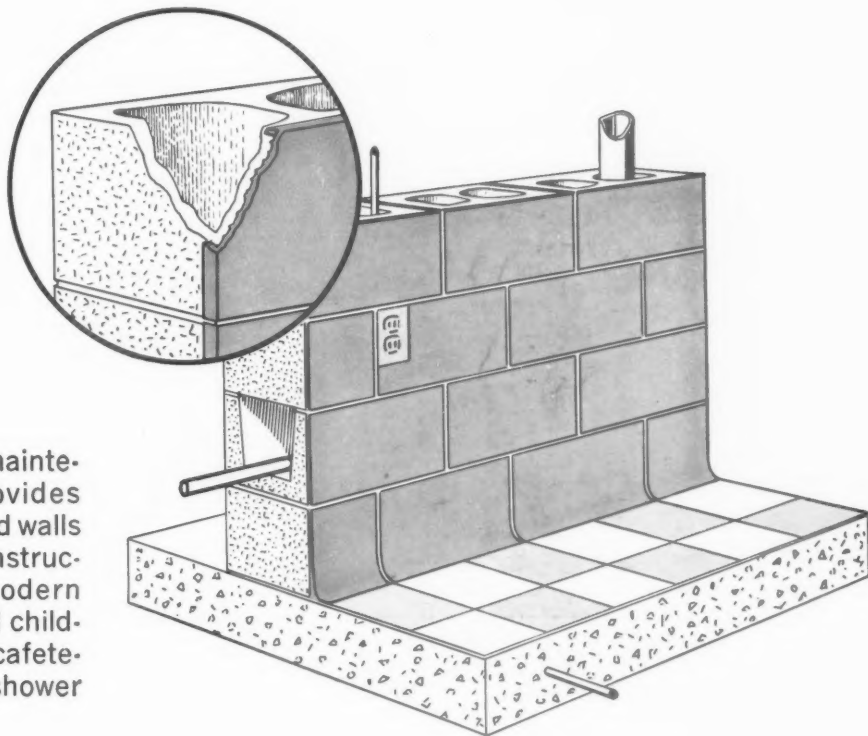
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